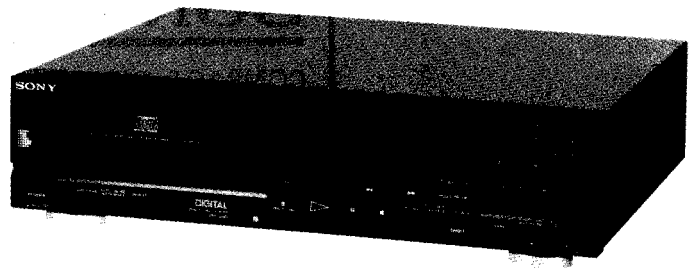
# CDP-M95

# SERVICE MANUAL

*AEP Model*
*UK Model*
*E Model*



## SPECIFICATIONS

**Compact disc player**

System — Compact disc digital audio system
Disc — Compact disc
Laser — Semiconductor laser ($\lambda$ = 780 nm)
Laser output — Less than 44.6 $\mu$W*
* This output is the value measured at a distance of 200 mm from the objective lens surface on the Optical Pick-up Block.
Spindle speed — 200 rpm to 500 rpm (CLV)
Scan velocity — 1.2– 1.4 m/sec.
Error correction — Sony Super Strategy Cross Interleave Reed Solomon Code
Number of channel — Two
D/A conversion — 16-bit linear
Frequency response — 2 – 20,000 Hz ± 0.5 dB
Signal to noise ratio — More than 104 dB
Dynamic range — More than 95 dB
Harmonic distortion — Less than 0.003% (1 kHz)
Channel separation — More than 95 dB (1 kHz)
Wow and flutter — Below measurable limit
Output jacks

| | |
|---|---|
| LINE OUT (phono jacks) | Output level 2 V (at 50 kilohms) Load impedance over 10 kilohms |
| DIGITAL OUT (COAXIAL) (phono jacks) | Output level 0.5 Vp-p (at 75 ohms) Load impedance 75 ohms |
| DIGITAL OUT (OPTICAL) (optical output connector) | Wave length 660 nm Output level –18 dBm |
| HEADPHONES (stereo phone jack) | Output level max. 15 mW Load impedance 32 ohms |

**Disc**

Track pitch — 1.6$\mu$m
Sampling frequency — 44.1 kHz
Quantization — 16 bit linear quantizing/channel
Modulation system — EFM
Transfer rate — 2.03 Mbit/sec. (before modulation)

**General**

Power requirements
AEP model:
220 V AC (240 V AC adjustable by Sony personnel), 50/60 Hz
UK model:
240 V AC, 50/60 Hz
E model:
110 - 120 V or 220 - 240 V AC adjustable, 50/60 Hz
Power consumption — 11 W
Dimensions — Approx. 355 × 95 × 310 mm (w/h/d) (14 × 3 3/4 × 12 1/5 inches)
Weight — Approx. 4 kg (8 lb 14 oz), net

**Supplied accessories**

Remote commander (1)
Audio signal connecting cord (1)
Sony New Super batteries Sony SUM-3 (NS) (2)

**Remote commander (RM-D600)**

Remote control system — Infrared control
Power requirements — 3V DC with two R6 (size AA) batteries
Dimensions — Approx. 65 × 20 × 170 mm (w/h/d) (2 1/2 × 13/16 × 6 3/4 inches)
Weight — Approx. 135 g (5 oz) incl. batteries

Design and specifications subject to change without notice.

MICROFILM

COMPACT DISC PLAYER

SONY®

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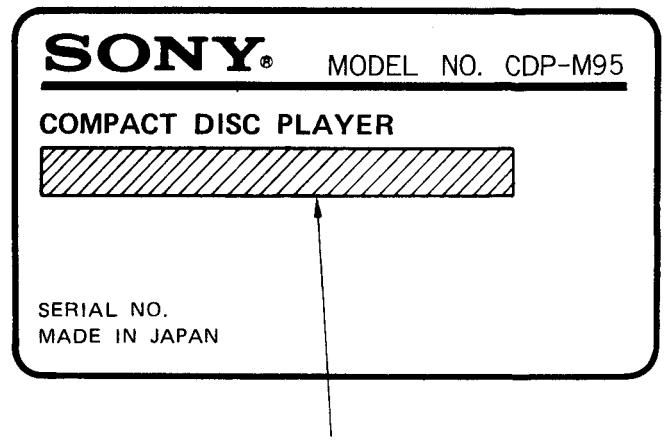
## MODEL IDENTIFICATION

*– Specification Labels –*




AEP model: AC: 220 V ~ 50/60 Hz
UK model: AC: 240 V ~ 50/60 Hz
E model: AC: 110, 120, 220, 240 V ~ 50/60 Hz

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.**

# SERVICING NOTES

## PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

**CAUTION**

Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

1. Laser Diode Properties
   - Material: GaAlAs
   - Wavelength: 780 nm
   - Emission Duration: continuous
   - Laser Output: max. 44.6 μW*

     * This output is the value measured at a distance of about 200 mm from the objective lens surface on the Optical Pick-up Block.

2. During service, do not take the Optical Pick-up Block apart, and do not adjust the APC circuit. If there is a breakdown in the APC circuit (including laser diode), replace the entire Optiocal Pick-up Block (including APC borad).

## BESKYTTELSE AF ØJNE MOD LASERSTRÅLING UNDER SERVICE

I dette apparat anvendes laserlys. Derfor skal nedenstående instruktioner nøje følges under service.

Følg iøvrigt instruktionerne i servicemanualen.

**ADVARSEL!!**

**Under service må øjnene ikke komme nær objektiv-linsen på den optiske pick-up enhed. I tilfælde af at det er nødvendigt at kontrollere udsendelsen af laserlys, skal det ske i en afstand af mere end 25 cm fra den optiske pick-up.**

1. Laser-didoe data
   - Materiale: GaAlAs
   - Bølgelængde: 780 nm
   - Udstråling: Kontinuerlig
   - Laseroutput: Max. 0,4 mW*

     * Målt i 1,6 mm afstand fra overfladen af objektivlinsen på den optiske pick-up enhed.

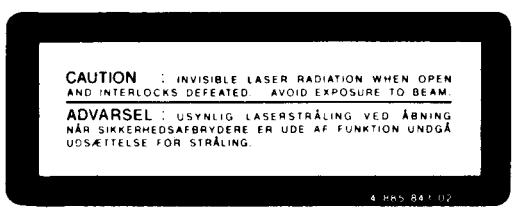
   - Klassifikation: Klasse IIIb.

2. Adskil aldrig den optiske pick-up enhed under service, og juster ikke APC kredsløbet (Automatic Power Control). Hvis APC kredsløbet (incl. laserdioden) bryder ned, skal hele den optiske pick-up enhed (incl. APC printkortet) udskiftes.

## LASER ADVARSEL MÆRKNING

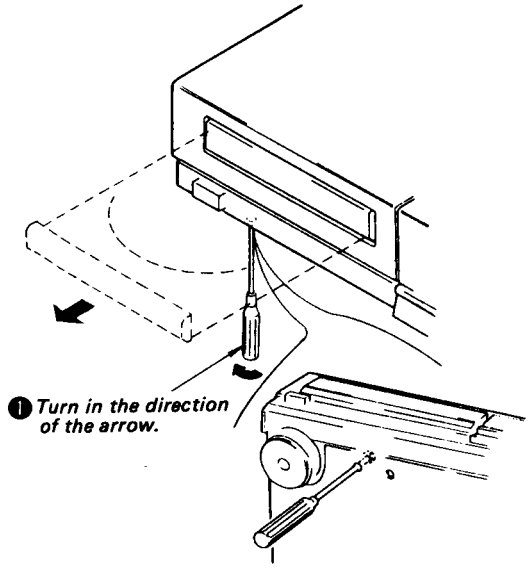
Følgende mærkning findes indvendig i apparatet:

1. Advarsel Mærkning


CAUTION : INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL : USYNLIG LASERSTRÅLING VED ÅBNING NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION UNDGÅ UDSÆTTELSE FOR STRÅLING.

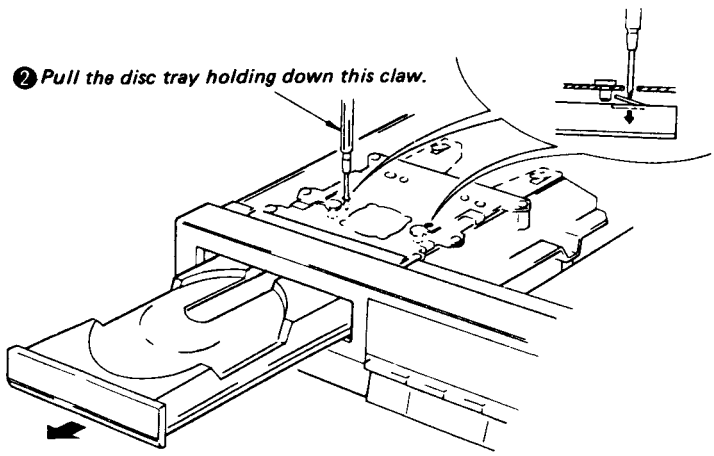
**VAROITUS:** Laite sisältää, laserdiodin, joka lähettää (näkymätöntä) silmille vaarallista lasersateilyä.

## HOW TO OPEN THE DISC TRAY WHEN POWER SWITCH TURNS OFF




*Caution: When you work, keep the set horizontal.*

## DISC TRAY REMOVAL




## NOTES ON HANDLING THE OPTICAL PICK-UP BLOCK OR BASE UNIT

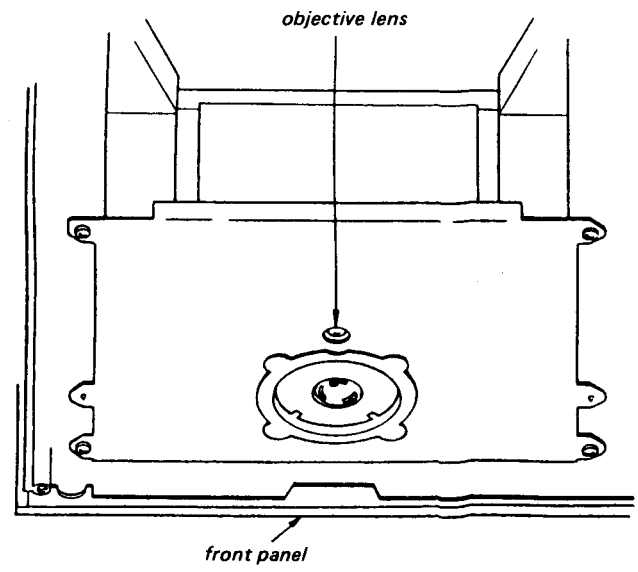
The laser diode in the optical pick-up block may suffer electrostatic breakdown because of the potential difference generated by the charged electrostatic load, etc. on clothing and the human body.
During repair, pay attention to electrostatic breakdown and also use the procedure in the printed matter which is included in the repair parts.
The flexible board is easily damaged and should be handled with care.

## NOTES ON LASER DIODE EMISSION CHECK

The laser beam on this model is concentrated so as to be focused on the disc reflective surface by the objective lens in the optical pick-up block. Therefore, when checking the laser diode emission, observe from more than 30 cm away from the objective lens.

## LASER DIODE AND FOCUS SERCH OPERATION CHECK

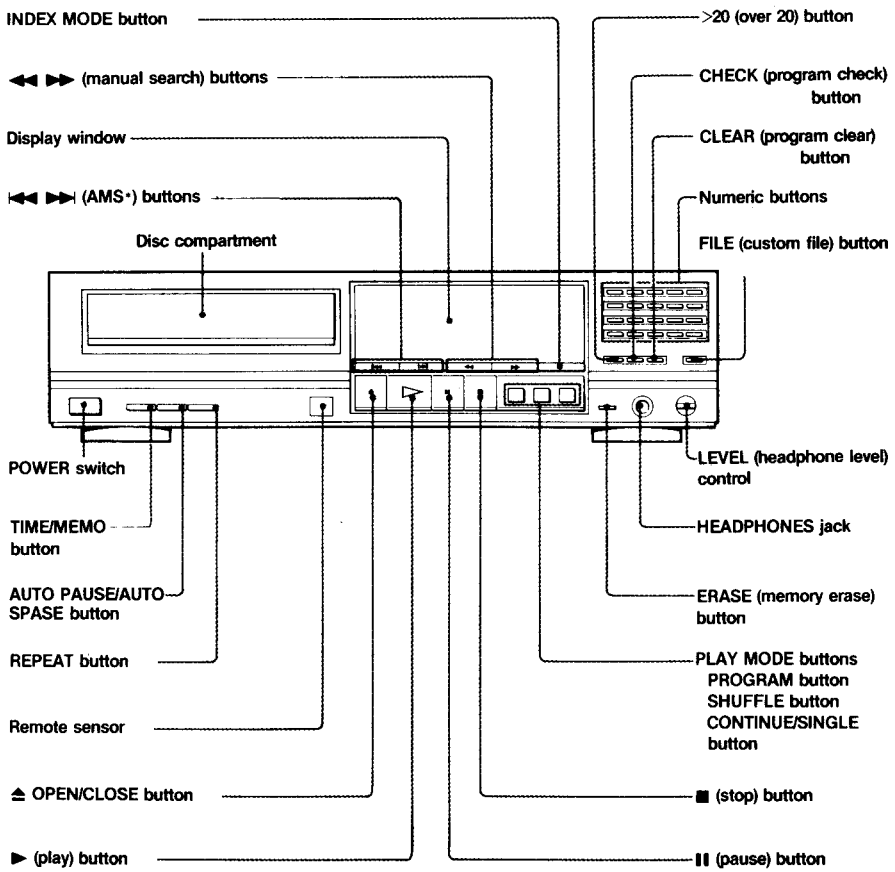
1. Make POWER switch on with no disc inserted and disc table closed.
2. Confirm that the following operation is performed while observing the objecting lens.




*① Confirm that laser beam is spread.*
*② Up and down motion of the objective lens. (3 times)*

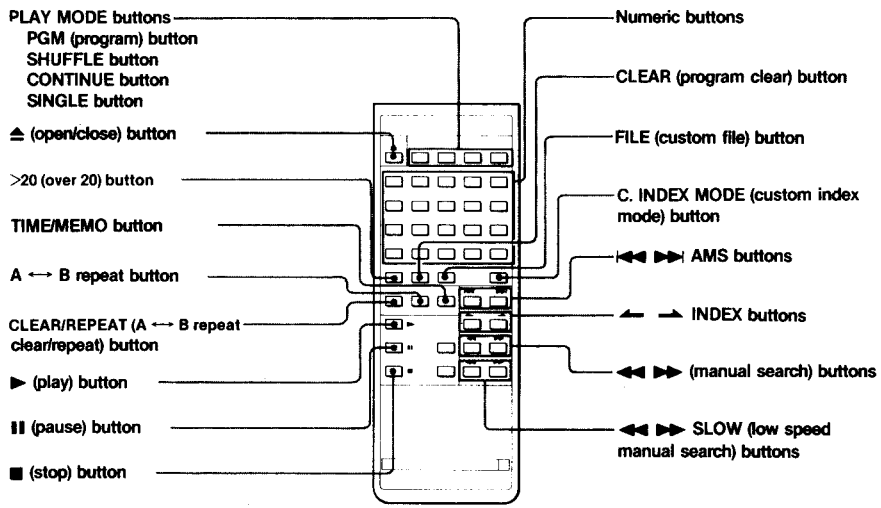
# Location of Controls

## Front Panel




* AMS is an abbreviation of Automatic Music Sensor.

## Remote Commander




## Remote Control Operation

Once the POWER switch is turned on, you can remotely control various functions of the player with the supplied remote commander.

**Operations which is performed only with the remote commander**
- Manual search at low speed
- Index search
- A ⟷ B repeat

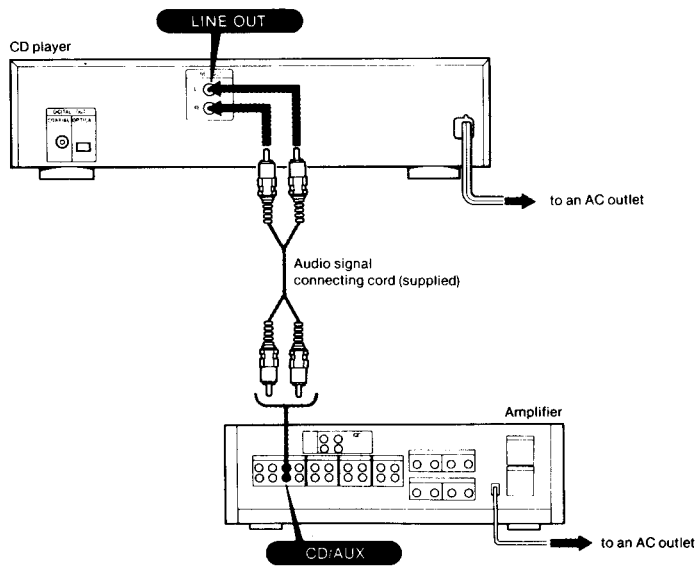
**Operations which cannot be performed with the remote commander**
- Turning the power on and off
- Headphones volume control
- Setting and releasing auto pause function
- Setting and releasing auto space function
- Checking the programmed selections
- Writing a comment about a disc (disc memo function)
- Clearing custom indexes
- Clearing all custom files

**Notes on the remote commander and remote control operation**
- Keep the commander away from extremely hot or humid places.
- Avoid dropping any foreign objects into the commander casing, particularly when replacing the batteries.
- To avoid a malfunction, do not simultaneously depress two or more buttons.
- Avoid exposure of the remote sensor to direct sunlight or lighting apparatus. Such exposure can cause a malfunction.

# Connections

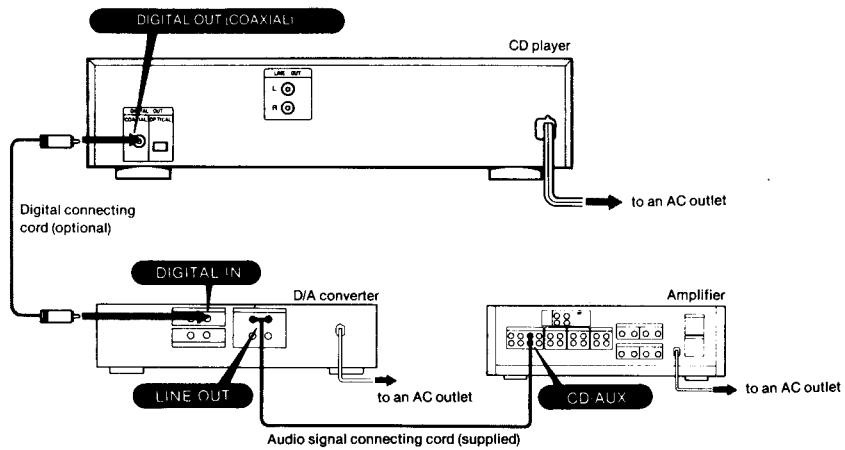
## Connection Diagrams

**Connecting the amplifier directly**

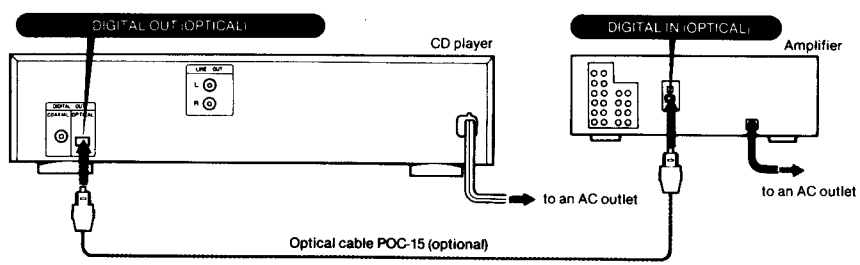



**Connecting D/A converter unit and amplifier**

Sony DAS-702ES D/A converter unit or other equivalent D/A converter using a digital audio interface can be connected to the DIGITAL OUT jack.




**Connecting an amplifier having an optical input connector**

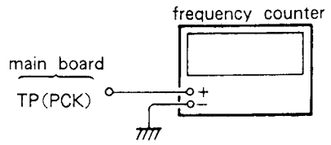


# SECTION 1
# ELECTRICAL ADJUSTMENTS

1. Perform adjustments in the order given.
2. Use YEDS-18 disc (3-702-101-01) unless otherwise indicated.
3. Use the oscilloscope with more than 10MΩ impedance.

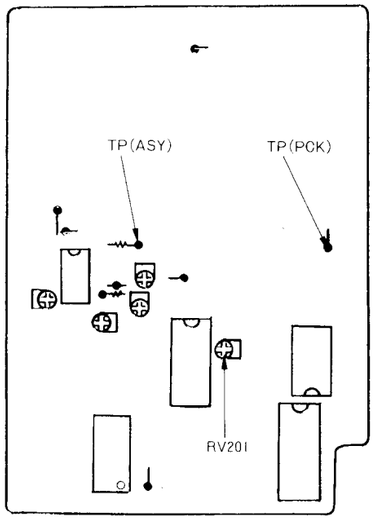
## RF PLL Frequency Adjustment

**Procedure :**




1. Connect test point TP (ASY) to ground with jumper wire.
2. Turn POWER switch on.
3. Connect the frequency counter to test point TP(PCK).
4. Adjust RV201 so that the reading on frequency counter is 4.3218MHz±30kHz.
5. Remove lead wire connecting TP(ASY) and ground.
6. Put disc (YEDS-18) in and press ▷ button.
7. Confirm that the reading on frequency counter is 4.3218MHz.

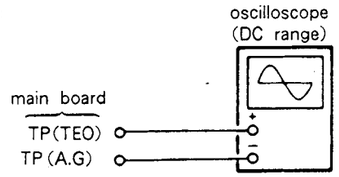
**Adjustment Location :** main board




## E-F Balance Adjustment

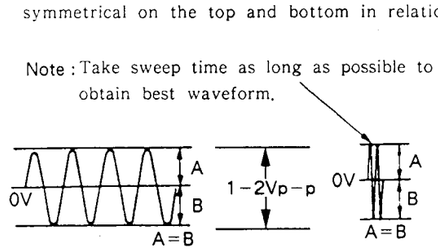
This adjustment should be made when replacing Optical Pick-up Block.

**Procedure :**

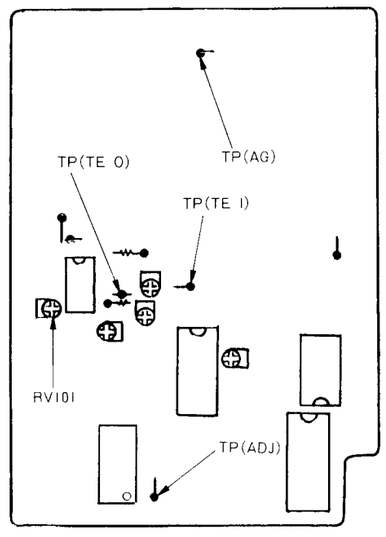



1. Connect test points TP (ADJ) and TP (TE I) to ground with jumper wires.
2. Connect oscilloscope to test points TP(TEO) and TP (A. G).
3. Turn POWER switch on.
4. Put disc (YEDS-18) in and playback the 6th selection.
5. Adjust RV101 so that the oscilloscope waveform is symmetrical on the top and bottom in relation to 0V.

Note : Take sweep time as long as possible to obtain best waveform.



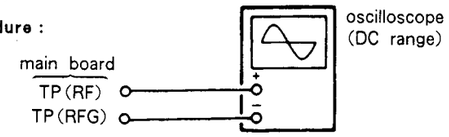

**Adjustment Location :** main board




## Focus Bias Adjustment

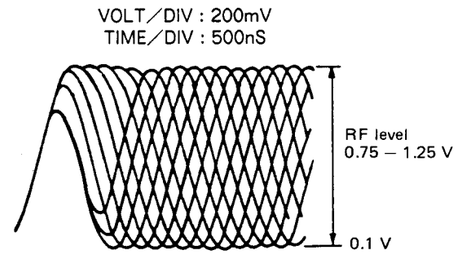
This adjustment should be made when replacing Optical Pick-up Block.

**Procedure :**



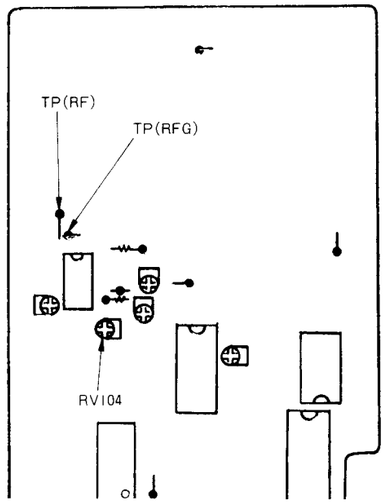

1. Connect oscilloscope to test points TP(RF) and TP (RF G).
2. Turn POWER switch on.
3. Put disc (YEDS-18) in and playback the 6th selection.
4. Adjust RV104 for an optimum waveform eye pattern or so that the peak is maximum. Optimum eye pattern means that shape "◇" can be clearly distinguished at the center of the waveform.

**● RF Signal Reference Waveform (eye pattern)**




When observing the eye pattern, set the oscilloscope for AC range and raise vertical sensitivity.

**Adjustment Location ;** main boad




**REFERENCE**

## Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick-up follow-up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

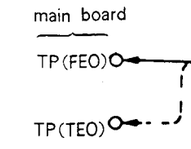
- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

| Symptoms \ Gain | Focus | Tracking |
|---|---|---|
| ● The time until music starts becomes longer for STOP →▷PLAY or automatic selection (⏮ ⏭ buttons pressed. (Normally takes about 2 seconds.) | low | low or high |
| ● Music does not start and disc continues to rotate for STOP→▷PLAY or auto-matic selection (⏮ ⏭ buttons pressed.) | – | low |
| ● Disc table opens shortly after STOP→▷PLAY. | low or high | – |
| ● Sound is interrupted during PLAY. Or time counter display stops progressing. | – | low |
| ● More poise during 2-axis device oper-ation. | high | high |

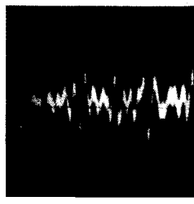
The following is a
-Simple Adjustment-

**Note :** Since exact
remember the
performing the
simple adjustm
the controls to

**Procedure :**

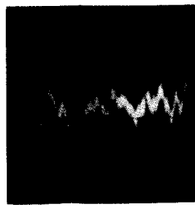



1. Keep the set hori
   (If the set is not
   performed due to
2. Insert disc (YEDS
3. Connect oscilloscc
4. Adjust RV103 so
   the figure below.

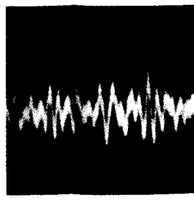


● Incorrent Exampl
adjusted wavefor

low focus



high focu



replacing Optical

oscilloscope
(DC range)

P(RF) and TP

the 6th selection.
form eye pattern
mum eye pattern
rly distinguished

tern)

level
75 – 1.25 V

1 V

e oscilloscope for

REFERENCE

### Focus/Tracking Gain Adjustment

A frequency response analyzer is necessary in order to perform this adjustment exactly.

However, this gain has a margin, so even if it is slightly off, there is no problem. Therefore, do not perform this adjustment.

Focus/tracking gain determines the pick - up follow - up (vertical and horizontal) relative to mechanical noise and mechanical shock when the 2-axis device operate.

However, as these reciprocate, the adjustment is at the point where both are satisfied.

- When gain is raised, the noise when the 2-axis device operates increases.
- When gain is lowered, it is more susceptible to mechanical shock and skipping occurs more easily.
- When gain adjustment is off, the symptoms below appear.

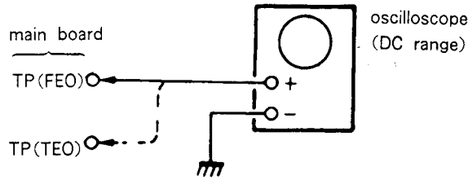
| Symptoms \ Gain | Focus | Tracking |
|---|---|---|
| ●The time until music starts becomes longer for STOP →▷PLAY or automatic selection (⏮ ⏭ buttons pressed. (Normally takes about 2 seconds.) | low | low or high |
| ●Music does not start and disc continues to rotate for STOP→▷PLAY or auto - matic selection (⏮ ⏭ buttons pressed.) | – | low |
| ●Disc table opens shortly after STOP→▷PLAY. | low or high | – |
| ●Sound is interrupted during PLAY. Or time counter display stops progressing. | – | low |
| ●More poise during 2-axis device oper - ation. | high | high |

The following is a simple adjustment method.

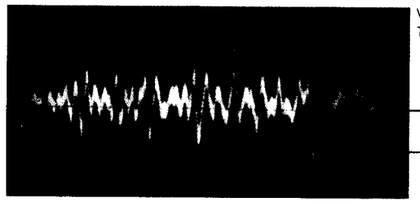
–Simple Adjustment–

**Note :** Since exact adjustment cannot be performed, remember the positions of the controls before performing the adjustment. If the positions after the simple adjustment are only a little different, return the controls to the original position.

**Procedure :**

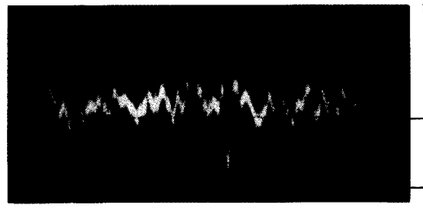



1. Keep the set horizontal.
   (If the set is not horizontal, this adjustment cannot be performed due to the gravity against the 2 axis device.)
2. Insert disc (YEDS-18) playback the 6th selection.
3. Connect oscilloscope to main board TP(FEO).
4. Adjust RV103 so that the waveform is as shown in the figure below. (focus gain adjustment)

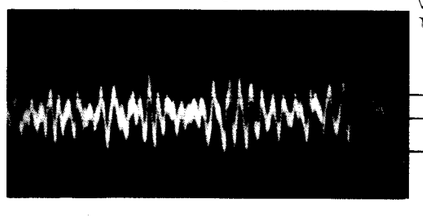



● Incorrent Examples (DC level changes more than on adjusted waveform)

low focus gain



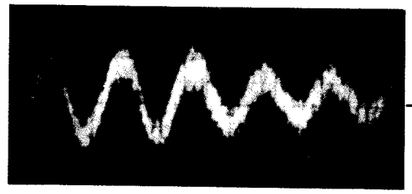

high focus gain




5. Connect oscilloscope to main board TP(TEO).
6. Adjust RV102 so that the waveform is as shown in the figure below. (tracking gain adjustment)

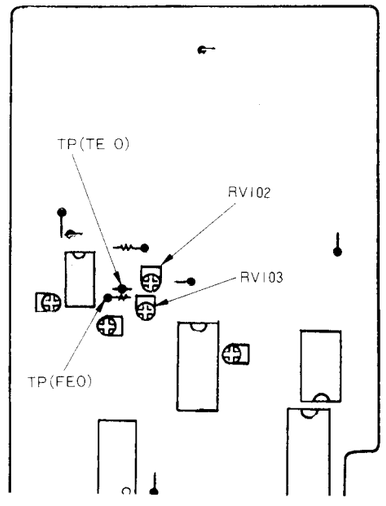
● Incorrect Examples (fundamental wave appears)

low tracking gain



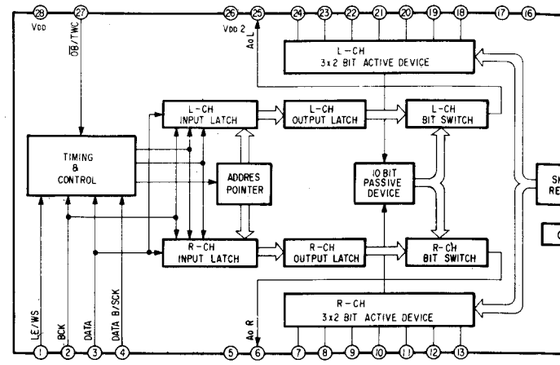

high tracking gain
(higher fundamental wave than for low gain)

**Adjustment Location :** main board

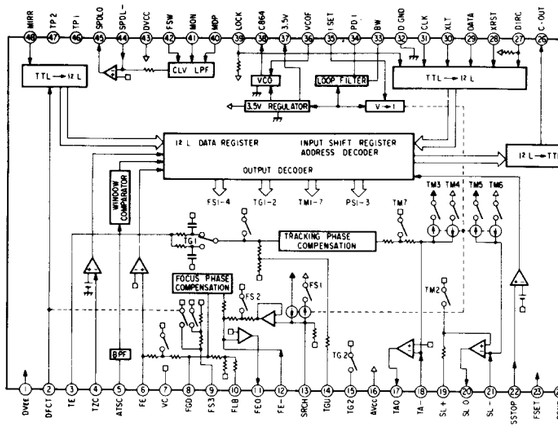



## 2-1. IC BLOCK DIAGRAMS

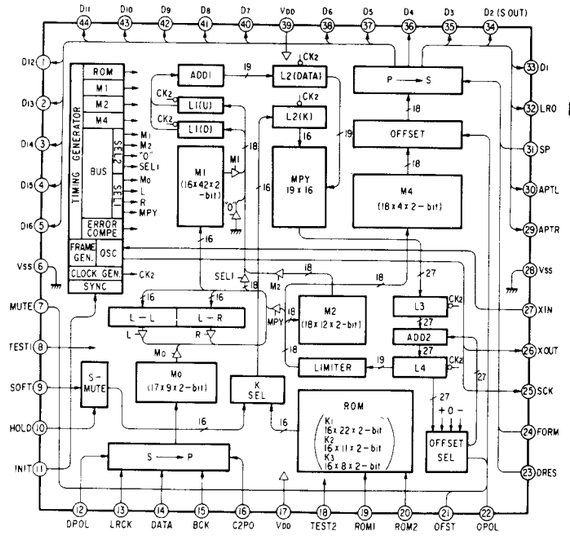
**TDA1541-N5**




**CXA1182S**

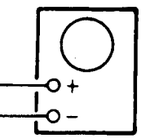



**CXD1088Q**



ple adjustment method.

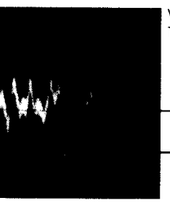
tment cannot be performed,
tions of the controls before
stment. If the positions after the
re only a little different, return
original position.



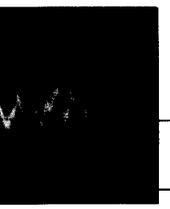

7

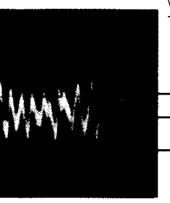
1.

ental, this adjustment cannot be
ravity against the 2 axis device,
playback the 6th selection.
main board TP(FEO).
the waveform is as shown in
us gain adjustment)




C level changes more than on

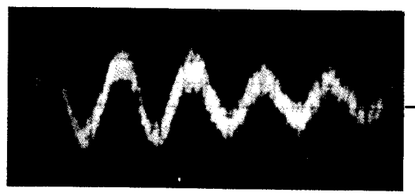



5. Connect oscilloscope to main board TP(TEO).
6. Adjust RV102 so that the waveform is as shown in the figure below. (tracking gain adjustment)

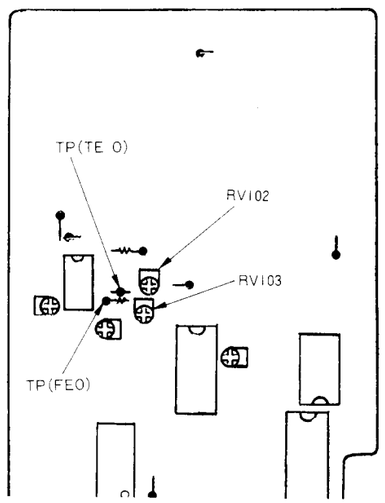
● Incorrect Examples (fundamental wave appears)

low tracking gain




high tracking gain
(higher fundamental wave than for low gain)

**Adjustment Location :** main board

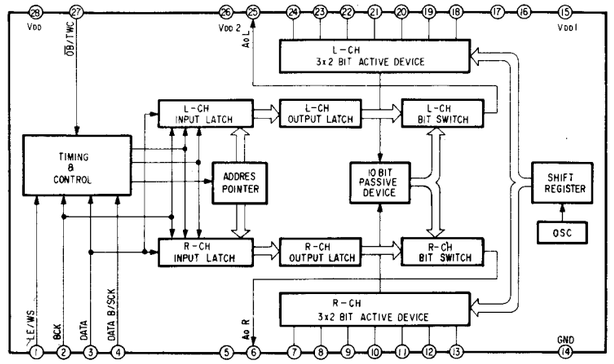




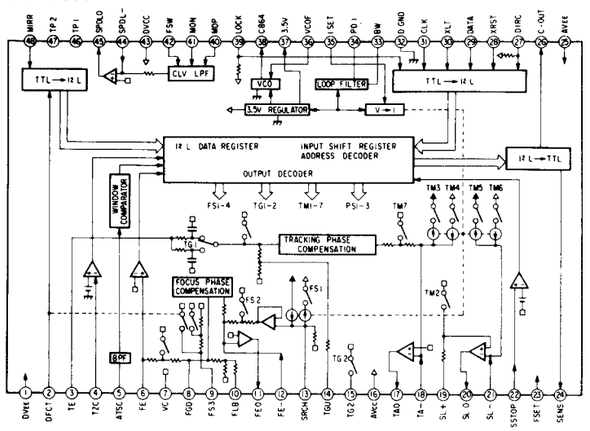

# SECTION 2
# DIAGRAMS

## 2-1. IC BLOCK DIAGRAMS

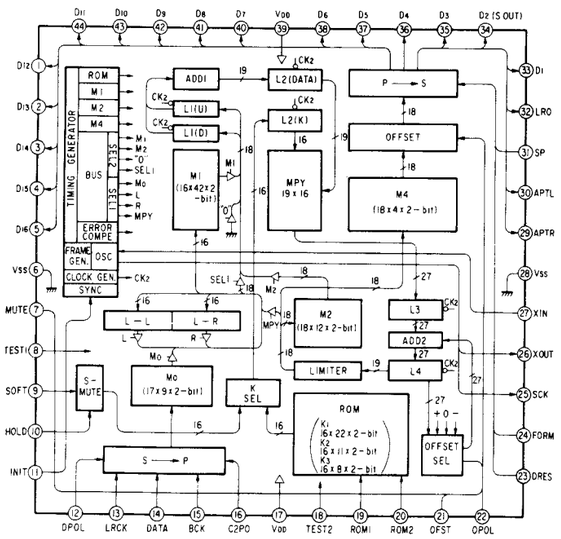
### TDA1541-N5



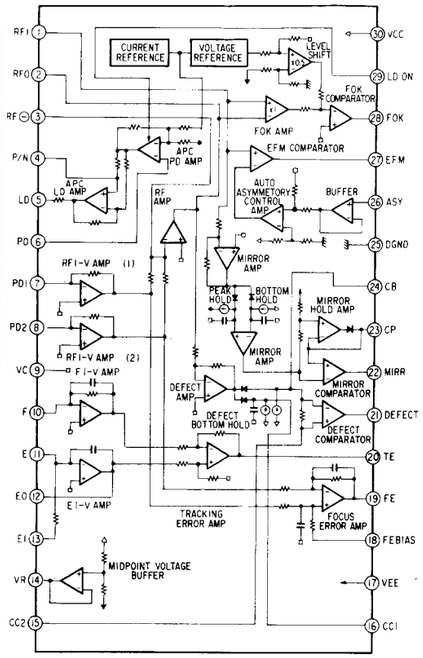

### CXA1182S



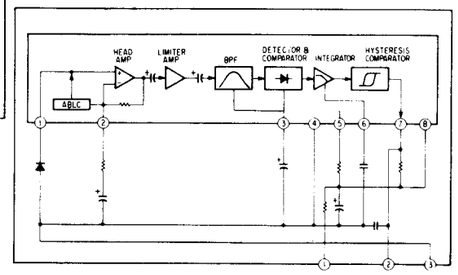

### CXD1088Q



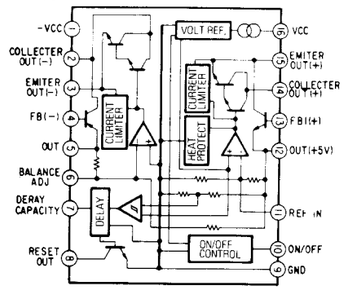

### CXA1081S



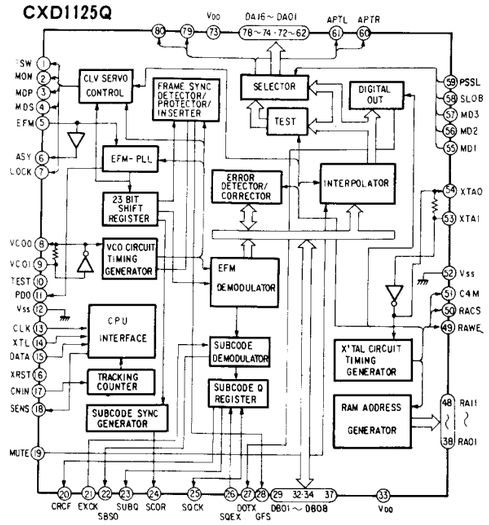

### BX-1387



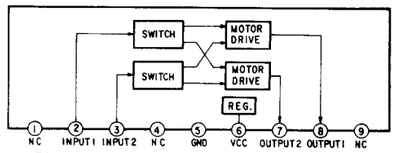

### M5290-16



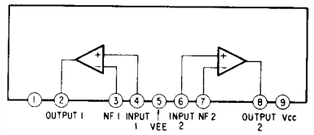

### CXD1125Q



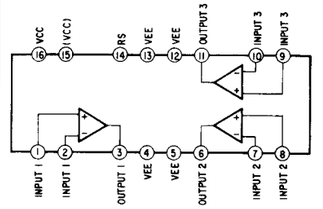

### BA6208



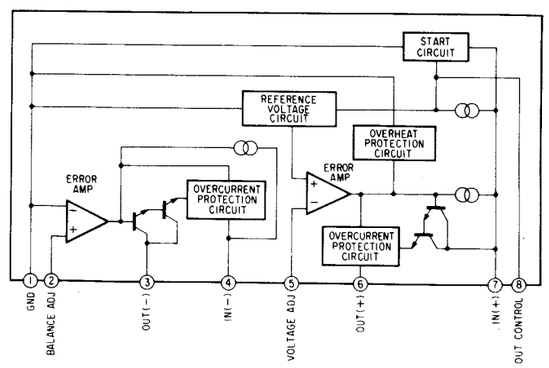

### TA7256P




### LA6520




### M5230L-A



CDP-M95 CDP-M95

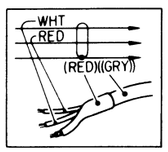
## 2-2. MOUNTING DIAGRAM

• See page 22 for Semiconductor Lead Layouts.

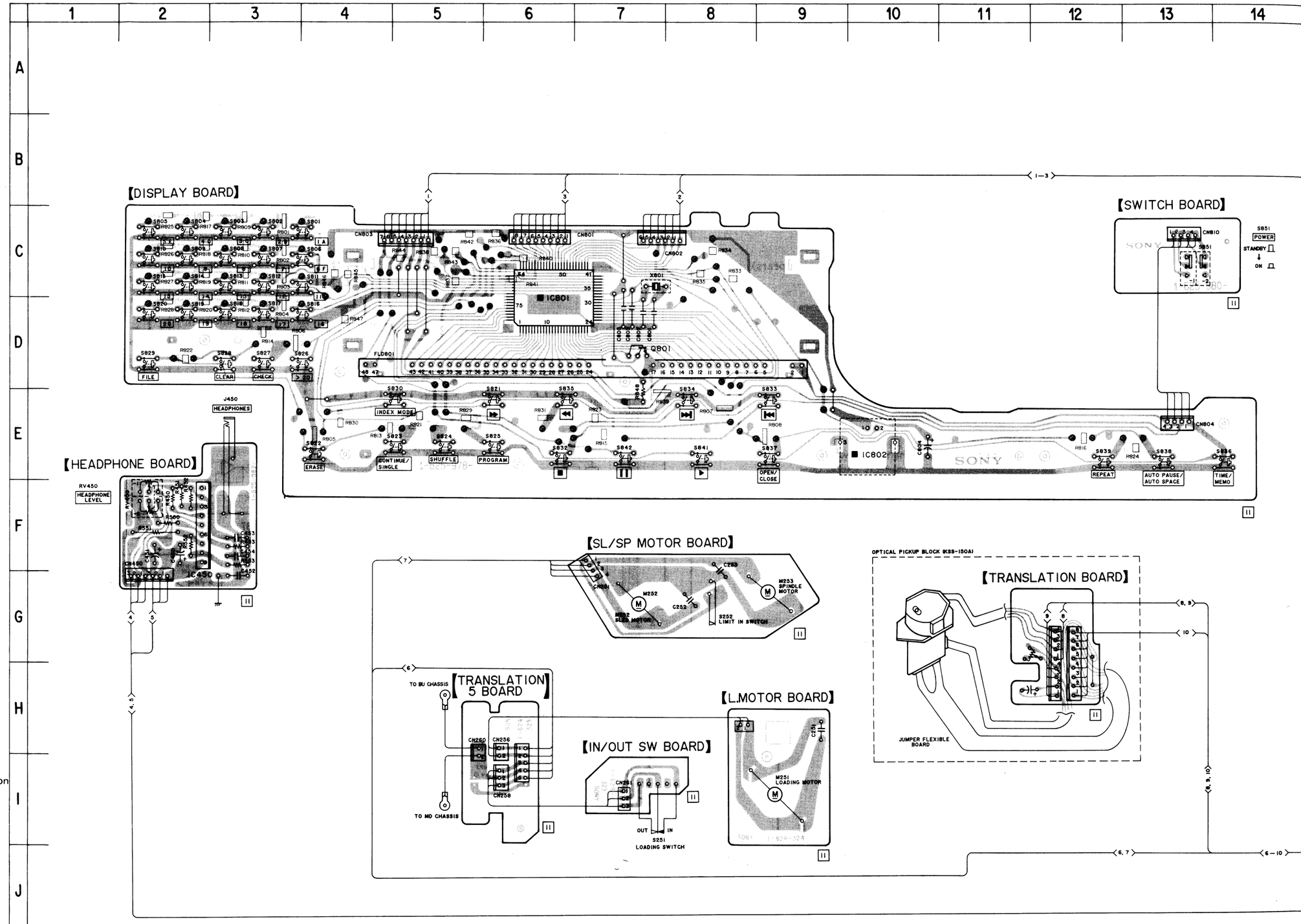
| Ref. No. | Location | Ref. No. | Location |
|---|---|---|---|
| D101 | I-19 | Q101 | H-18 |
| D904 | G-20 | Q205 | D-16 |
| D905 | H-22 | Q206 | E-17 |
| D906 | H-22 | Q400 | H-27 |
| D907 | H-22 | Q401 | H-27 |
| D908 | H-23 | Q402 | G-27 |
| D909 | H-23 | Q500 | I-28 |
| D910 | H-23 | Q501 | G-28 |
| D911 | H-23 | Q502 | G-28 |
| D912 | H-22 | Q520 | E-24 |
| D913 | H-22 | Q521 | E-22 |
| D914 | H-22 | Q522 | E-23 |
| D915 | G-21 | Q523 | E-22 |
| D920 | H-24 | Q801 | D-7 |
| D921 | H-24 | Q900 | F-22 |
| D922 | H-24 | Q901 | F-23 |
| D923 | H-24 | Q910 | E-23 |
| D943 | I-22 | Q911 | G-22 |
| D945 | H-21 | Q912 | G-20 |
| | | Q913 | G-21 |
| IC101 | H-19 | Q920 | G-23 |
| IC201 | H-16 | Q931 | F-24 |
| IC202 | H-17 | Q940 | I-22 |
| IC204 | E-18 | | |
| IC301 | G-16 | | |
| IC302 | D-20 | | |
| IC303 | E-21 | | |
| IC351 | C-16 | | |
| IC352 | C-18 | | |
| IC380 | C-22 | | |
| IC400 | H-27 | | |
| IC450 | F-2 | | |
| IC500 | H-28 | | |
| IC520 | C-21 | | |
| IC521 | D-22 | | |
| IC801 | C-6 | | |
| IC802 | E-9 | | |
| IC900 | F-23 | | |
| IC921 | F-24 | | |
| IC940 | H-21 | | |

**Note:**

- Color code or sleeving over the end of the jacket.

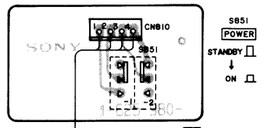


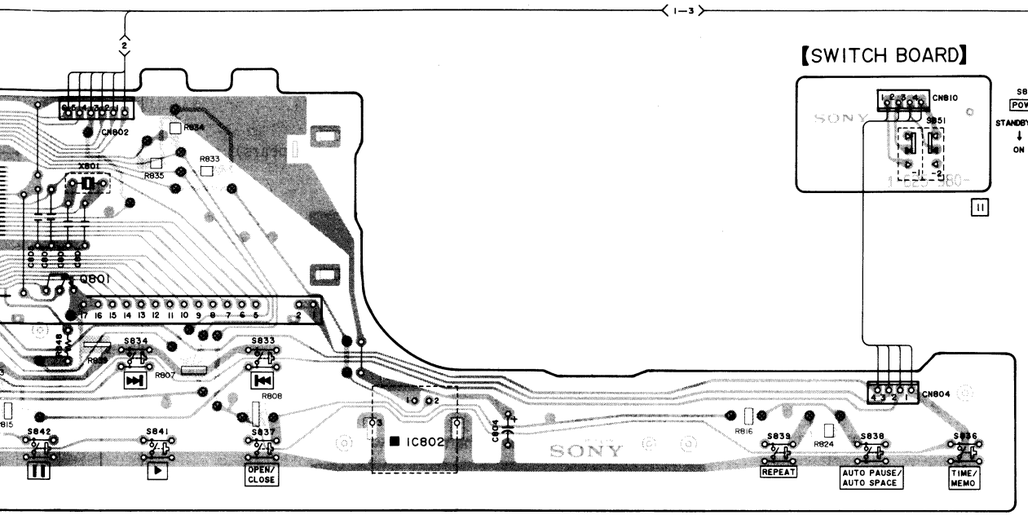

- ○——: parts extracted from the component side.
- ●——: parts extracted from the conductor side.
- ■ : parts mounted on the conductor side.
- ○—●—○ : Jumper wire connected to the ground pattern on the component side.
- ▒▒ : Pattern on the side which is seen.
- ▒▒ : Pattern of the rear side.
- □ : Printed resistors extracted from the rear side.



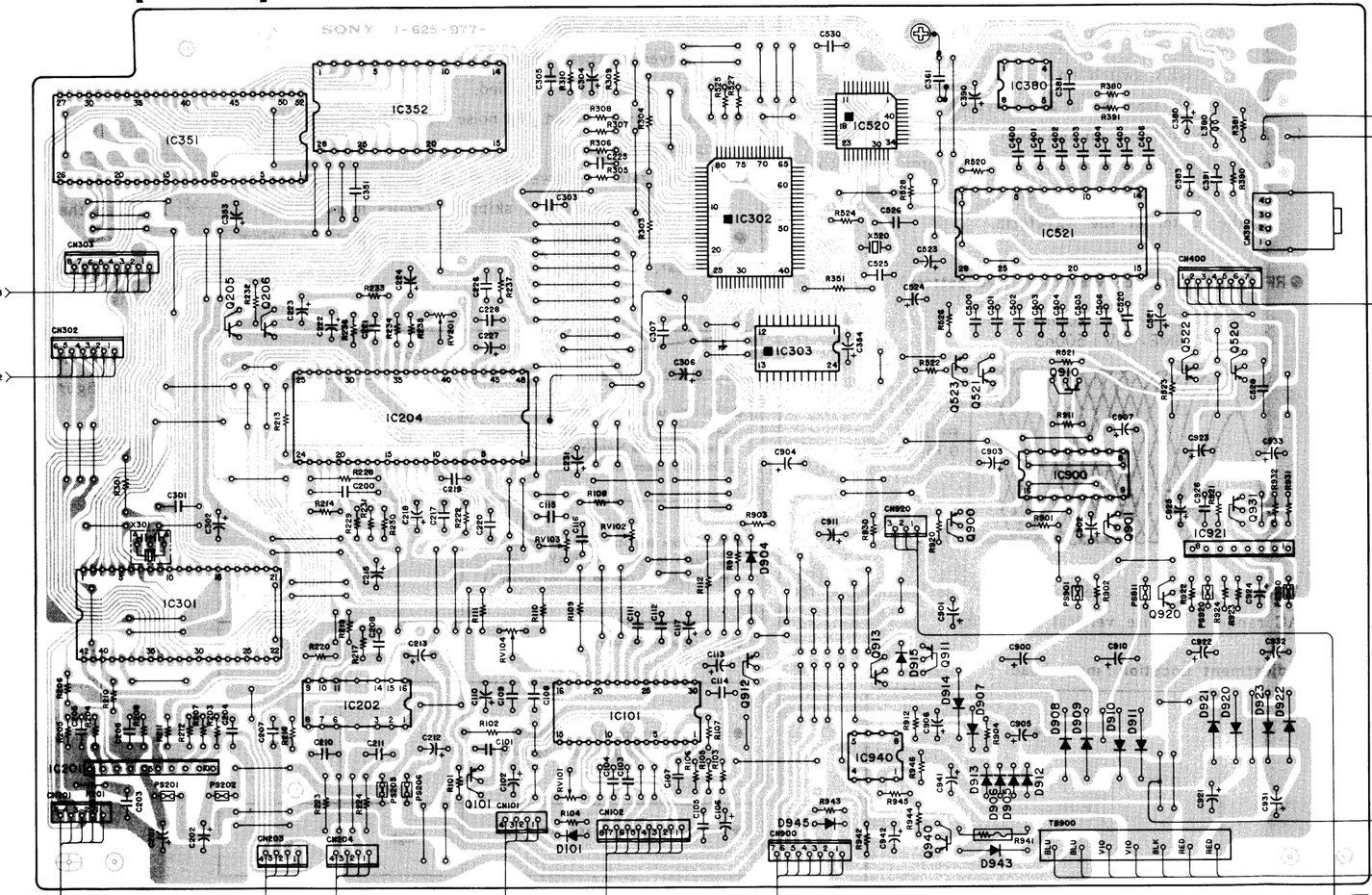
| 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

【SWITCH BOARD】

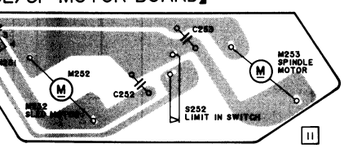



【MAIN BOARD】

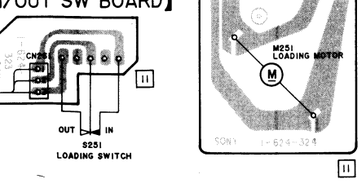


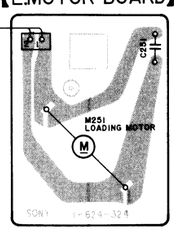

【SL/SP MOTOR BOARD】




【L.MOTOR BOARD】

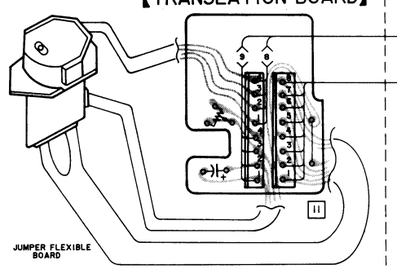
【I/OUT SW BOARD】

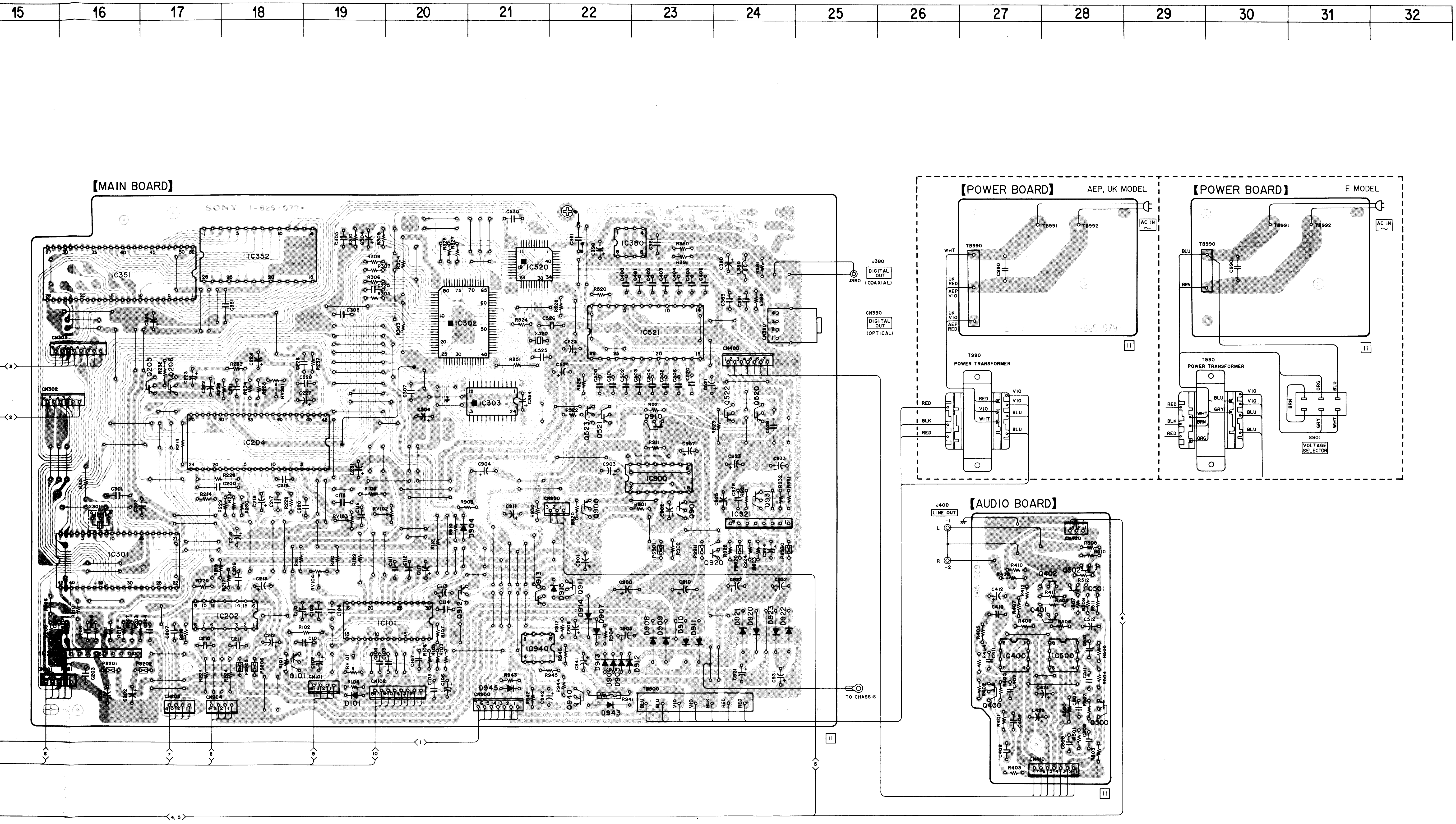


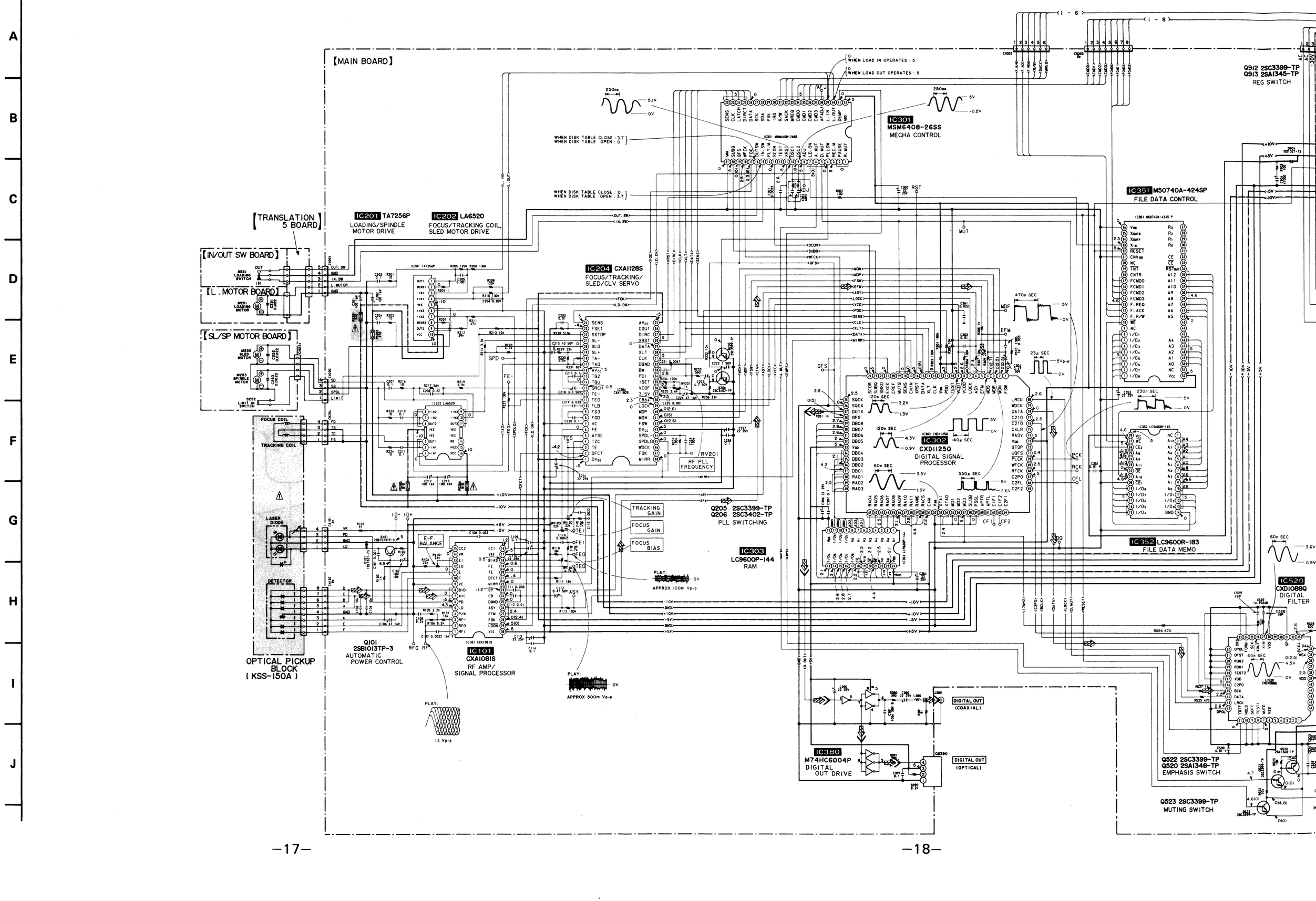




OPTICAL PICKUP BLOCK (KSS-150A)

【TRANSLATION BOARD】




15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32
【MAIN BOARD】
【POWER BOARD】 AEP, UK MODEL
【POWER BOARD】 E MODEL
【AUDIO BOARD】
J380 DIGITAL OUT (COAXIAL)
CN390 DIGITAL OUT (OPTICAL)
T990 POWER TRANSFORMER
AC IN
S901 VOLTAGE SELECTOR
J400 LINE OUT
TO CHASSIS


【MAIN BOARD】
【TRANSLATION 5 BOARD】
【IN/OUT SW BOARD】
【L. MOTOR BOARD】
【SL/SP MOTOR BOARD】
IC201 TA7256P
LOADING/SPINDLE MOTOR DRIVE
IC202 LA6520
FOCUS/TRACKING COIL, SLED MOTOR DRIVE
IC204 CXA1128S
FOCUS/TRACKING/ SLED/CLV SERVO
IC301 MSM6408-26SS
MECHA CONTROL
IC302 CXD1125Q
DIGITAL SIGNAL PROCESSOR
IC303 LC9600P-144
RAM
IC351 M50740A-424SP
FILE DATA CONTROL
IC352 LC9600R-183
FILE DATA MEMO
IC380 M74HC6004P
DIGITAL OUT DRIVE
IC520 CXD1069Q
DIGITAL FILTER
IC101 CXA1081S
RF AMP/ SIGNAL PROCESSOR
Q101 2SB1013TP-3
AUTOMATIC POWER CONTROL
Q205 2SC3399-TP
Q206 2SC3402-TP
PLL SWITCHING
Q912 2SC3399-TP
Q913 2SA1345-TP
REG SWITCH
Q522 2SC3399-TP
Q520 2SA1348-TP
EMPHASIS SWITCH
Q523 2SC3398-TP
MUTING SWITCH
OPTICAL PICKUP BLOCK ( KSS-150A )
RF PLL FREQUENCY
TRACKING GAIN
FOCUS GAIN
FOCUS BIAS
E-F BALANCE
DIGITAL OUT (COAXIAL)
DIGITAL OUT (OPTICAL)
WHEN LOAD IN OPERATES : 5
WHEN LOAD OUT OPERATES : 5
WHEN DISK TABLE CLOSE : 3.7
WHEN DISK TABLE OPEN : 0
WHEN DISK TABLE CLOSE : 0
WHEN DISK TABLE OPEN : 3.7
PLAY: APPROX 100m Vp-p
PLAY: APPROX 500m Vp-p
PLAY: 1.1 Vp-p

10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26

WHEN LOAD IN OPERATES : 5
WHEN LOAD OUT OPERATES : 5

IC301
MSM6408-26SS
MECHA CONTROL

IC351 M50740A-424SP
FILE DATA CONTROL

IC352 LC9600R-183
FILE DATA MEMO

IC302
CXD1125Q
DIGITAL SIGNAL PROCESSOR

IC520
CXD1088Q
DIGITAL FILTER

IC521 TDA1541-N5
D/A CONVERTER

IC380
M74HC6004P
DIGITAL OUT DRIVE

DIGITAL OUT (COAXIAL)
DIGITAL OUT (OPTICAL)

Q912 2SC3399-TP
Q913 2SA1345-TP
REG SWITCH

Q910 2SD1913SA-R
-5V REG

IC900
M5290P-16
+5V, -5V REG

Q911 2SA
2SA1345-TP
REG SWITCH

Q901
2SC3399-TP
REG SWITCH

Q900 2SB1274SA-R
+5V REG

Q940
2SB1014TP-3
-30V REG

IC940 M5219P
COMPALATOR

IC921
M5230L-A
-15V,-15V REG

Q920
2SC3399
-TP
REG SWITCH

Q931 2SB734
-15V REG

Q522 2SC3399-TP
Q520 2SA1348-TP
EMPHASIS SWITCH

Q523 2SC3399-TP
MUTING SWITCH

Q521 2SA1348-TP
MUTING SWITCH

【DISPLAY BOARD】

S801 - S842 : PUSH SWITCH

FLD801 FLUORESCENT INDICATOR TUBE

DISC MEMO TRACK STEP INDEX NEXT MIN SEC
PGM
SHUFFLE AUTO PAUSE
SINGLE AUTO SPACE
CUSTOM INDEX REPEAT
A B C D E F OVER20

| | | | | |
|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| 6 | 7 | 8 | 9 | 10 |
| 11 | 12 | 13 | 14 | 15 |
| 16 | 17 | 18 | 19 | 20 |

Q801
2SC2021-Q
BUFFER

IC801
CXP50516-068Q
MASTER CONTROL

IC802
BX1387
REMOTE SENSOR

【SWITCH BOARD】
S851 POWER
STANDBY
ON

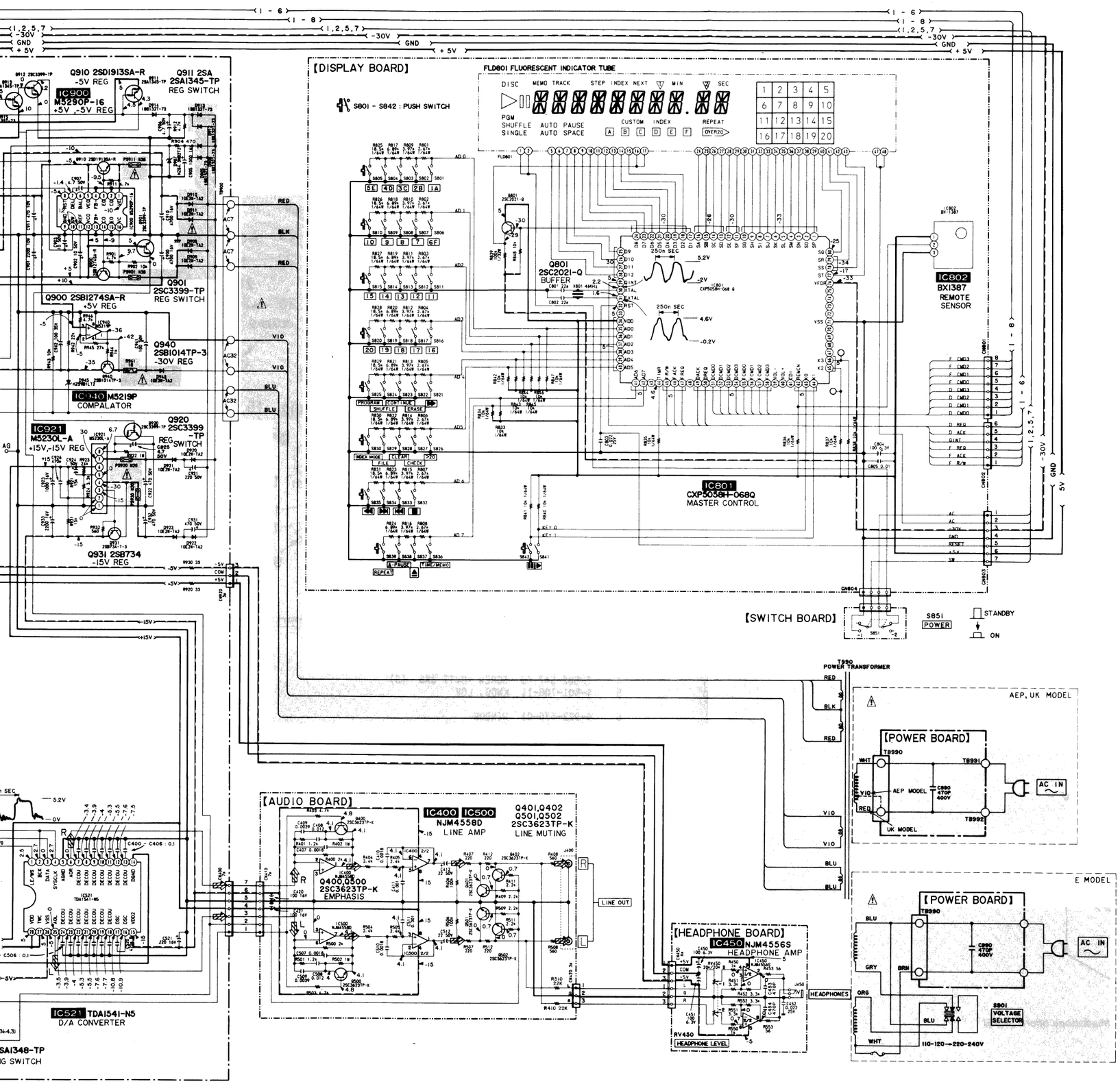
T990
POWER TRANSFORMER
RED
BLK
RED
VIO
VIO
BLU
BLU

【POWER BOARD】
T8990
T8991
T8992
WHT
VIO
RED
AEP MODEL
UK MODEL
C990 470P 400V

【AUDIO BOARD】
IC400 IC500
NJM4558D
LINE AMP
Q401,Q402
Q501,Q502
2SC3623TP-K
LINE MUTING
Q400,Q500
2SC3623TP-K
EMPHASIS
LINE OUT

【HEADPHONE BOARD】
IC450 NJM4556S
HEADPHONE AMP
HEADPHONES
RV450
HEADPHONE LEVEL

【POWER BOARD】
T8990
BLU
GRY
BRN
ORG
BLU
WHT
S901 VOLTAGE SELECTOR
110-120—220-240V




**Note:**

- All capacitors are in μF unless otherwise noted. pF: μμF 50WV or less are not indicated except for electrolytics and tantalums.
- All resistors are in Ω and 1/4 W or less unless otherwise specified.
- △ : internal component.

**Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.**

- Switch

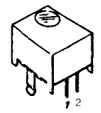
| Ref. No. | Switch | Position |
|---|---|---|
| S251 | LOADING | IN |
| S252 | LIMIT IN | OFF |
| S801 | KEY MATRIX | OFF |
| \| | | |
| S830 | | |
| S832 | | |
| \| | | |
| S839 | | |
| S841 | | |
| S842 | | |
| S851 | POWER | STANDBY |

- All 1/32 W or 1/64 W resistors are printed resistors.
- ▬▬ : B+ Line
- ▬ ▬ : B− Line
- ▭ : adjustment for repair.
- Voltage and waveforms are dc with respect to ground under no-signal conditions.
  no mark : STOP
  ( ) : PLAY
- Voltages are taken with a VOM (50 kΩ/V).
  Voltage variations may be noted due to normal production tolerances.
- Waveforms are taken with a oscilloscope.
  Voltage variations may be noted due to normal production tolerances.
- Signal path.
  ⇨ : CD
  ⇨ : digital out

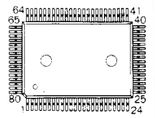
CDP-M95

- **Semiconductor Lead Layouts**

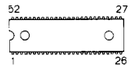
**BX-1387**




**CXD1125Q**
**CXP5058H-068Q**




**M50740A-424SP**

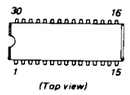



**NJM4556S**

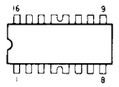
**2SB1013**

**HZS4.3NB3**
**HZS9B2L**

**CXA1081S**

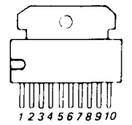



**LA6520**



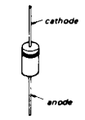

**M5230L-A**

**TA7256P**

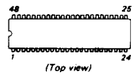



**2SB1014**

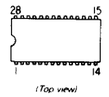
**10E2N**
**1SS132**



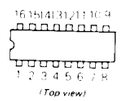

**CXA1182S**



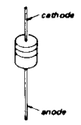

**LC9600R-145**
**TDA1541-N5**




**M5290P-16**

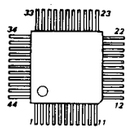



**2SA1345**
**2SA1348**
**2SC3399**
**2SC3402**
**2SC3623TP-L**

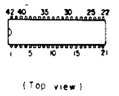



**2SB1274SA**
**2SD1913SA**

**CXD1088Q**



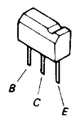

**MSM6408-26SS**



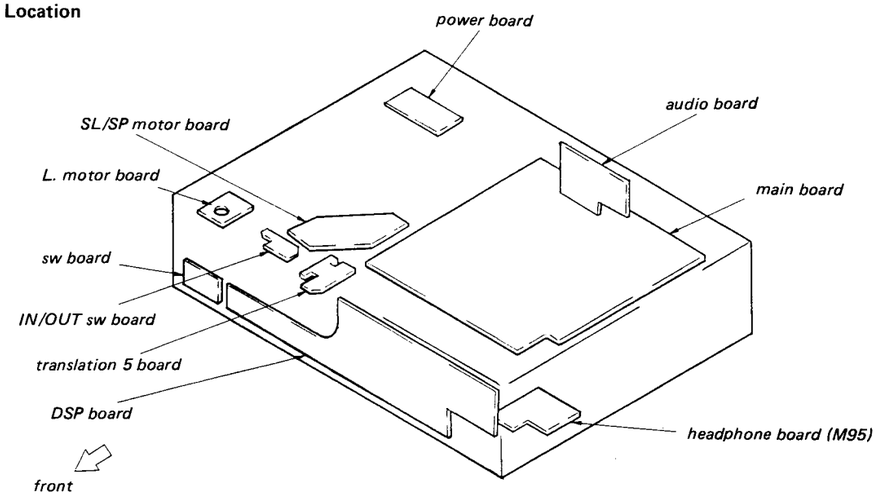

**M5219P**
**M74HC6004P**
**NJM4560D-D**

**2SB734**

**2SC2021**




- **Circuit Boards Location**



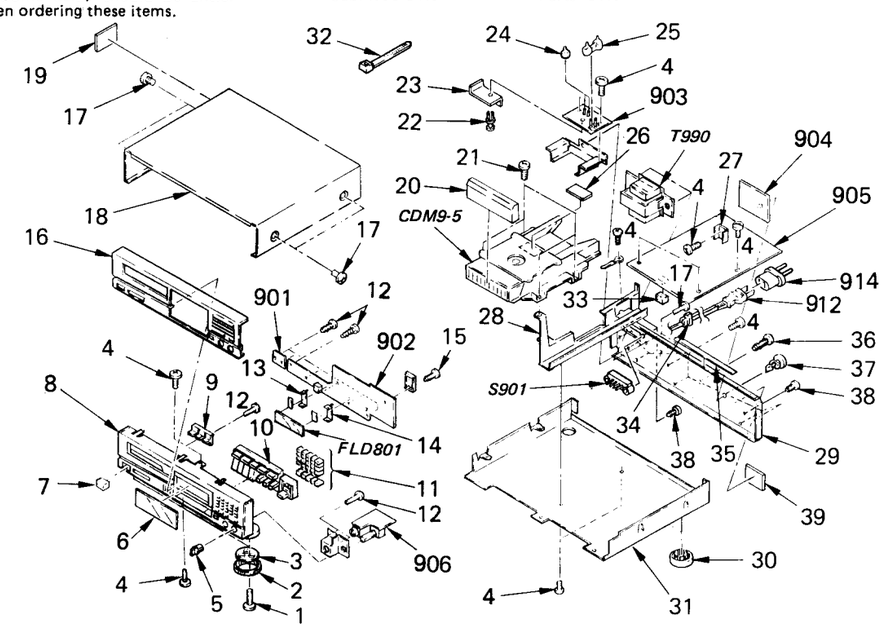
# SECTION 3
# EXPLODED VIEWS AND PARTS LIST

**NOTE:**

- The mechanical parts with no reference number in the exploded views are not supplied.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Due to standardization, parts with part number suffix -XX and -X may be different from the parts specified in the components used on the set.
- Color Indication of Appearance Parts
  Example:
  (RED) . . . KNOB, BALANCE (WHITE)
  ↑ Cabinet's Color ↑ Parts Color

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

(1)

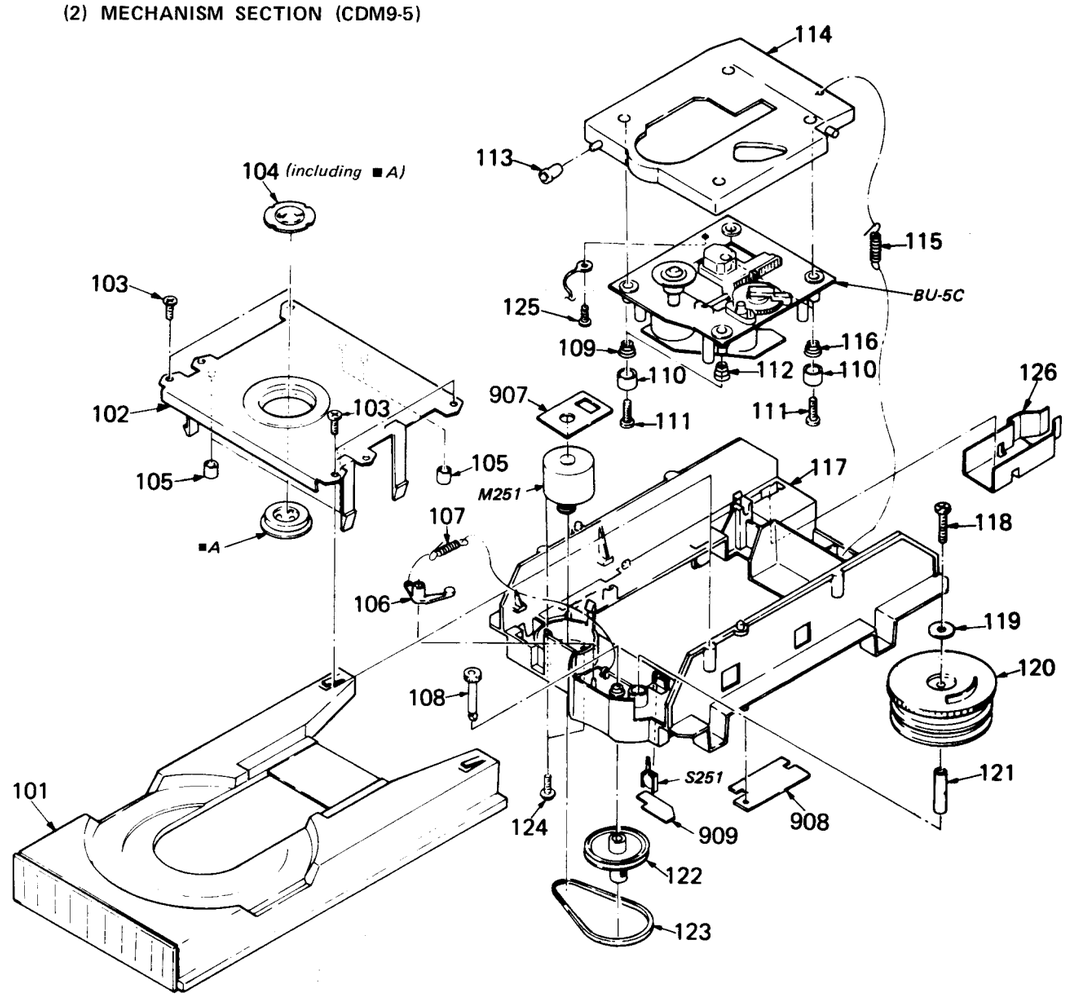



| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 1 | 3-703-685-21 | SCREW (+BV 3X8) | |
| 2 | 4-921-918-11 | PLATE, ORNAMENTAL | |
| 3 | 4-921-906-01 | FELT | |
| 4 | 7-682-547-09 | SCREW +BVTT 3X6 (S) | |
| 5 | 4-901-708-11 | KNOB, LOV | |
| 6 | 4-922-636-01 | WINDOW | |
| 7 | 4-922-903-01 | BUTTON (PW) | |
| 8 | *X-4917-541-1 | PANEL (BASE) ASSY | 3 |
| 9 | 4-922-638-01 | BUTTON (R) | |
| 10 | X-4917-542-1 | BUTTON ASSY | |
| 11 | 4-922-639-11 | BUTTON (MC) | |
| 12 | 7-685-134-19 | SCREW +BTP 2.6X8 TYPE2 N-S | |
| 13 | *4-922-524-01 | HOLDER (LEFT) | |
| 14 | *4-922-523-01 | HOLDER (RIGHT) | |
| 15 | 7-685-537-19 | SCREW +BTP 2.6X14 TYPE2 N-S | |
| 16 | *X-4917-548-1 | PANEL ASSY, FRONT | |
| 17 | 3-704-366-01 | SCREW (CASE) (M3X8) | |
| 18 | 4-919-376-01 | CASE | |
| 19 | 3-703-079-21 | (UK)...LABEL (BACK), SUB CAUTION | |
| 20 | 4-922-635-21 | PANEL (LOADING) | |
| 21 | 7-682-548-04 | SCREW +BVTT 3X8 (S) | |
| 22 | 3-531-576-11 | RIVET | |
| 23 | 4-922-632-01 | SHEET, INSULATING | |
| 24 | *4-912-962-01 | COVER (1P), TERMINAL | |
| 25 | *4-912-963-01 | COVER (2P), TERMINAL | |
| 26 | 4-885-843-02 | LABEL, CAUTION, LASER | |
| 27 | *4-854-790-00 | HEAT SINK | |
| 28 | *4-922-911-01 | CHASSIS (R) | |
| 29 | *4-922-642-21 | (AEP)...PANEL, BACK | |
| | *4-922-642-31 | (UK)....PANEL, BACK | |
| | *4-922-642-41 | (E).....PANEL, BACK | |
| 30 | X-4922-001-1 | FOOT ASSY | |
| 31 | *4-921-903-51 | CHASSIS | |
| 32 | 3-655-653-21 | BAND (TAITON), BINDING | |
| 33 | 9-911-843-XX | RUBBER, CUSHION | |
| 34 | *3-703-571-12 | BUSHING (2104), CORD | |
| 35 | 9-911-835-XX | CUSHION, F | |
| 36 | 4-922-647-01 | SCREW (PIN JACK) (M3X12) | |
| 37 | *4-912-181-21 | SUPPORT, PC | |
| 38 | 7-685-646-79 | SCREW +BVTP 3X8 TYPE2 N-S | |
| 39 | *4-885-838-00 | LABEL, CLASS 1 | |
| 40 | 3-703-079-21 | (UK)...LABEL, CAUTION (BACK) | |
| 901 | *1-625-980-11 | PC BOARD, SW (PRC) | |
| 902 | *1-625-978-11 | PC BOARD, DISPLAY (PRC) | |
| 903 | *1-625-979-11 | PC BOARD, POWER (PRC) | |
| 904 | *1-625-981-11 | PC BOARD, AUDIO | |
| 905 | *A-4651-189-A | MOUNTED PCB, MAIN | |
| 906 | *1-625-982-11 | PC BOARD, HEADPHONE | |
| 912 | ⚠1-551-188-XX | (E).....CORD, POWER | |
| | ⚠1-555-795-00 | (AEP)...CORD, POWER, EULO PLUG | |
| | ⚠1-556-035-00 | (UK)....CORD, POWER | |
| 913 | *1-624-325-11 | PC BOARD, TRANSLATION 5 | |
| 914 | ⚠1-526-565-00 | (E)...AC PLUG ADAPTOR | |
| FLD801 | 1-519-428-21 | INDICATOR TUBE, FLUORESCENT | |
| S901 | ⚠1-570-046-21 | (E)...SWITCH, VOLTAGE CHANGE | |
| T990 | ⚠1-449-210-11 | (AEP,UK)...TRANSFORMER, POWER | |
| T990 | ⚠1-449-238-11 | (E).....TRANSFORMER, POWER | |



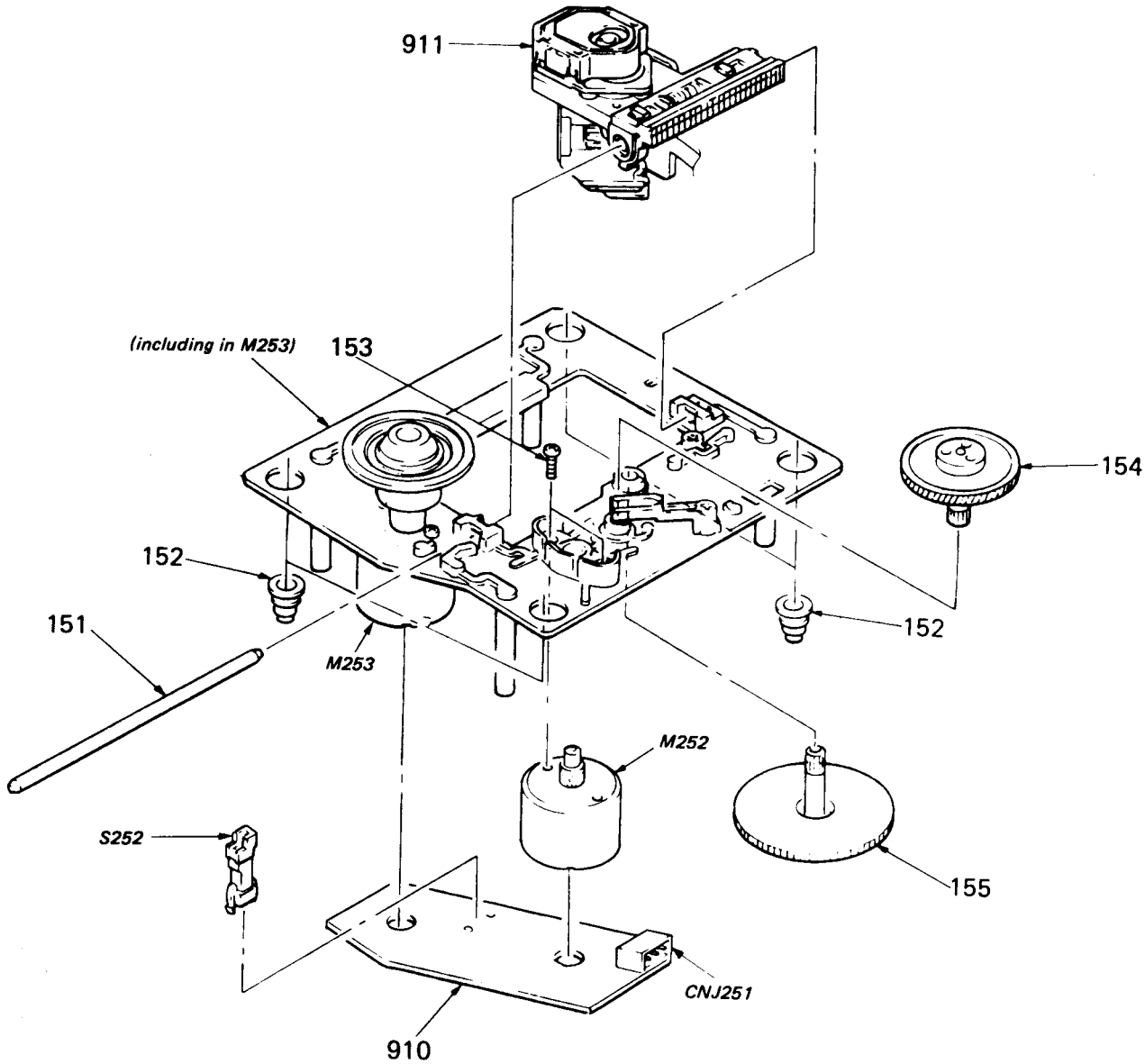


(2) MECHANISM SECTION (CDM9-5)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 101 | *4-922-515-01 | TABLE, DISK | |
| 102 | *4-922-510-01 | REINFORCEMENT | |
| 103 | 7-685-646-79 | SCREW +BTP 3X8 TYPE2 N-S | |
| 104 | A-4665-012-C | MAGNET ASSY | |
| 105 | *3-576-990-01 | CUSHION | |
| 106 | 4-917-519-01 | LEVER, SET | |
| 107 | 4-917-514-01 | SPRING, TENSION | |
| 108 | 4-922-508-01 | GEAR (DRIVING) | |
| 109 | 4-917-541-01 | SPRING (B) | |
| 110 | 4-917-508-01 | HOLDER, SP | |
| 111 | 7-685-535-19 | SCREW +BTP 2.6X10 TYPE2 N-S | |
| 112 | 4-918-669-01 | SPRING (W) | |
| 113 | 4-917-515-01 | ROLLER | |
| 114 | *4-922-514-01 | BRACKET (BU-5) | |
| 115 | 4-917-526-01 | SPRING, TENSION | |
| 116 | 4-917-507-01 | SPRING (H) | |
| 117 | *4-922-516-01 | CHASSIS (MD) | |
| 118 | 7-685-552-19 | SCREW +BTP 3X25 TYPE2 N-S | |
| 119 | 0-056-028-00 | WASHER, PLAIN, 14 DIA. | |
| 120 | 4-922-511-01 | GEAR (LOADING) | |
| 121 | *4-917-523-01 | COLLAR, CAM | |
| 122 | 4-922-512-01 | PULLEY | |
| 123 | 4-917-522-01 | BELT | |
| 124 | 7-621-759-40 | +PSW, 2.6X6 | |
| 125 | 7-621-770-67 | SCREW +BVTT 2.6X6 (S) | |
| 126 | 4-923-541-11 | SPRING | |
| 907 | *1-624-324-11 | PC BOARD, L.MOTOR | |
| 908 | *1-624-325-11 | PC BOARD, TRANSLATION 5 | |
| 909 | *1-624-323-11 | PC BOARD, IN/OUT SW | |
| M251 | A-4608-346-A | MOTOR ASSY, L | |
| S251 | 1-571-300-11 | SWITCH, ROTARY (LOADING IN/OUT) | |

(3) OPTICAL PICK-UP BLOCK (BU-5C)




| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 151 | 4-917-565-01 | SHAFT, SLED | |
| 152 | 4-917-562-01 | INSULATOR | |
| 153 | 7-621-255-15 | SCREW +P 2X3 | |
| 154 | 4-917-567-01 | GEAR (M) | |
| 155 | 4-917-564-01 | GEAR (P), FLATNESS | |

| No. | Part No. | Description | Remarks |
|---|---|---|---|
| 910 | *1-624-322-11 | PC BOARD, SL/SP MOTOR | |
| 911 | ⚠8-848-062-01 | **DEVICE,OPTICS (KSS-150A)** | |
| CNJ251 | *1-564-720-21 | PIN, CONNECTOR (SMALL TYPE) 4P | |
| M252 | X-4917-504-1 | ASSY, MOTOR (SLED) | |
| M253 | X-4917-523-1 | ASSY, MOTOR (SPINDLE) | |
| S252 | 1-571-274-11 | SWITCH, LEAF (LIMIT IN) | |

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

# SECTION 4
# ELECTRICAL PARTS LIST

**NOTE:**

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- Items marked "★" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- If there are two or more same circuits in a set such as a stereophonic machine, only typical circuit parts may be indicated and capacitors and resistors in other same circuits may be omitted.

CAPACITORS:
MF: μF, PF: μμF.

RESISTORS
- All resistors are in ohms.
- F: nonflammable

COILS
- MMH: mH, UH: μH

SEMICONDUCTORS
In each case, U: μ, for example:
UA...: μA..., UPA...: μPA...,
UPC...: μPC, UPD...: μPD...

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

| Ref.No. | Part No. | Description |
|---|---|---|
| 901 | *1-625-980-11 | PC BOARD, SW (PRC) |
| 902 | *1-625-978-11 | PC BOARD, DISPLAY (PRC) |
| 903 | *1-625-979-11 | PC BOARD, POWER (PRC) |
| 904 | *1-625-981-11 | PC BOARD, AUDIO |
| 905 | *A-4651-189-A | MOUNTED PCB, MAIN |
| 906 | *1-625-982-11 | PC BOARD, HEADPHONE |
| 907 | *1-624-324-11 | PC BOARD, L.MOTOR |
| 909 | *1-624-323-11 | PC BOARD, IN/OUT SW |
| 910 | *1-626-304-11 | PC BOARD, SL/SP MOTOR |
| 911 | ⚠ 8-848-062-01 | PICKUP, OPTICS KSS-150A |
| 912 | ⚠1-551-188-XX | (E).....CORD, POWER |
| | ⚠1-555-795-00 | (AEP)...CORD, POWER, EULO PLUG |
| | ⚠1-556-035-00 | (UK)....CORD, POWER |
| 913 | *1-624-325-11 | PC BOARD, TRANSLATION 5 |
| 914 | ⚠1-526-565-00 | (E)....AC PLUG ADAPTOR |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| C101 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C102 | 1-124-443-00 | ELECT | 100MF | 20% | 10V |
| C103 | 1-162-199-31 | CERAMIC | 10PF | 5% | 50V |
| C104 | 1-162-199-31 | CERAMIC | 10PF | 5% | 50V |
| C105 | 1-162-198-31 | CERAMIC | 8.2PF | 10% | 50V |
| C106 | 1-124-477-11 | ELECT | 47MF | 20% | 16V |
| C107 | 1-161-375-00 | CERAMIC | 0.0022MF | 30% | 16V |
| C108 | 1-136-159-00 | FILM | 0.033MF | 5% | 50V |
| C109 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C110 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C111 | 1-136-159-00 | FILM | 0.033MF | 5% | 50V |
| C112 | 1-136-153-00 | FILM | 0.01MF | 5% | 50V |
| C113 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C114 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C115 | 1-161-375-00 | CERAMIC | 0.0022MF | 30% | 16V |
| C116 | 1-161-377-00 | CERAMIC | 0.0047MF | 30% | 16V |
| C117 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C200 | 1-161-379-00 | CERAMIC | 0.01MF | 30% | 16V |
| C201 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C202 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C203 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C204 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C205 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C206 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C207 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C208 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C210 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C211 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C212 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C213 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C215 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C217 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C218 | 1-123-382-00 | ELECT | 3.3MF | 20% | 50V |
| C219 | 1-136-159-00 | FILM | 0.033MF | 5% | 50V |
| C220 | 1-136-165-00 | FILM | 0.1MF | 5% | 50V |
| C221 | 1-130-479-00 | MYLAR | 0.0047MF | 5% | 50V |
| C222 | 1-124-499-11 | ELECT | 1MF | 20% | 50V |
| C223 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C224 | 1-124-477-11 | ELECT | 47MF | 20% | 16V |
| C225 | 1-162-294-31 | CERAMIC | 0.001MF | 10% | 50V |
| C226 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C227 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C228 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C231 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C251 | 1-136-157-00 | FILM | 0.022MF | 5% | 50V |
| C252 | 1-106-351-00 | MYLAR | 0.0022MF | 5% | 50V |
| C253 | 1-106-351-00 | MYLAR | 0.0022MF | 5% | 50V |
| C301 | 1-161-375-00 | CERAMIC | 0.0022MF | 30% | 16V |
| C302 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C303 | 1-161-379-00 | CERAMIC | 0.01MF | 30% | 16V |
| C304 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C305 | 1-136-159-00 | FILM | 0.033MF | 5% | 50V |
| C306 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C307 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C351 | 1-161-379-00 | CERAMIC | 0.01MF | 30% | 16V |
| C353 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C354 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C361 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C380 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C381 | 1-162-282-31 | CERAMIC | 100PF | 10% | 50V |
| C390 | 1-124-908-11 | ELECT | 22MF | 20% | 25V |
| C391 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C400 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C401 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C402 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C403 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C404 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C405 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C406 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C407 | 1-130-474-00 | MYLAR | 0.0018MF | 5% | 50V |
| C408 | 1-130-484-00 | MYLAR | 0.012MF | 5% | 50V |
| C409 | 1-130-478-00 | MYLAR | 0.0039MF | 5% | 50V |
| C410 | 1-130-474-00 | MYLAR | 0.0018MF | 5% | 50V |
| C411 | 1-130-471-00 | MYLAR | 0.001MF | 5% | 50V |
| C412 | 1-124-908-11 | ELECT | 22MF | 20% | 50V |

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| C420 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C421 | 1-126-101-11 | ELECT | 100MF | 20% | 16V |
| C450 | 1-123-661-00 | ELECT | 100MF | 20% | 6.3V |
| C451 | 1-123-661-00 | ELECT | 100MF | 20% | 6.3V |
| C452 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C453 | 1-162-290-31 | CERAMIC | 470PF | 10% | 50V |
| C454 | 1-162-290-31 | CERAMIC | 470PF | 10% | 50V |
| C500 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C501 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C502 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C503 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C504 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C505 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C506 | 1-162-851-11 | CERAMIC | 0.1MF | 20% | 16V |
| C507 | 1-130-474-00 | MYLAR | 0.0018MF | 5% | 50V |
| C508 | 1-130-484-00 | MYLAR | 0.012MF | 5% | 50V |
| C509 | 1-130-478-00 | MYLAR | 0.0039MF | 5% | 50V |
| C510 | 1-130-474-00 | MYLAR | 0.0018MF | 5% | 50V |
| C511 | 1-130-471-00 | MYLAR | 0.001MF | 5% | 50V |
| C512 | 1-124-908-11 | ELECT | 22MF | 20% | 50V |
| C520 | 1-162-290-31 | CERAMIC | 470PF | 10% | 50V |
| C521 | 1-124-120-11 | ELECT | 220MF | 20% | 16V |
| C523 | 1-124-444-00 | ELECT | 220MF | 20% | 10V |
| C524 | 1-124-444-00 | ELECT | 220MF | 20% | 10V |
| C525 | 1-162-204-31 | CERAMIC | 16PF | 5% | 50V |
| C526 | 1-162-205-31 | CERAMIC | 18PF | 5% | 50V |
| C528 | 1-162-291-31 | CERAMIC | 560PF | 10% | 50V |
| C530 | 1-161-379-00 | CERAMIC | 0.01MF | 30% | 16V |
| C801 | 1-162-207-31 | CERAMIC | 22PF | 5% | 50V |
| C802 | 1-162-207-31 | CERAMIC | 22PF | 5% | 50V |
| C803 | 1-161-494-00 | CERAMIC | 0.022MF | | 25V |
| C804 | 1-123-661-00 | ELECT | 100MF | 20% | 6.3V |
| C805 | 1-161-379-00 | CERAMIC | 0.01MF | 30% | 16V |
| C900 | 1-124-898-11 | ELECT | 4700MF | 20% | 16V |
| C901 | 1-124-893-11 | ELECT | 2200MF | 20% | 10V |
| C902 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C903 | 1-123-875-11 | ELECT | 10MF | 20% | 50V |
| C904 | 1-126-244-51 | ELECT | 47000MF | | 5.5V |
| C905 | 1-124-360-00 | ELECT | 1000MF | 20% | 16V |
| C906 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C907 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C910 | 1-124-898-11 | ELECT | 4700MF | 20% | 16V |
| C911 | 1-124-472-11 | ELECT | 470MF | 20% | 10V |
| C921 | 1-124-911-11 | ELECT | 220MF | 20% | 50V |
| C922 | 1-124-913-11 | ELECT | 470MF | 20% | 50V |
| C923 | 1-124-360-00 | ELECT | 1000MF | 20% | 16V |
| C924 | 1-124-499-11 | ELECT | 1MF | 20% | 50V |
| C925 | 1-124-927-11 | ELECT | 4.7MF | 20% | 50V |
| C926 | 1-162-290-31 | CERAMIC | 470PF | 10% | 50V |
| C931 | 1-124-913-11 | ELECT | 470MF | 20% | 50V |
| C932 | 1-124-913-11 | ELECT | 470MF | 20% | 50V |
| C933 | 1-124-556-11 | ELECT | 2200MF | 20% | 16V |
| C941 | 1-124-122-11 | ELECT | 100MF | 20% | 50V |
| C942 | 1-124-122-11 | ELECT | 100MF | 20% | 35V |
| C990 ⚠ | 1-162-578-00 | CERAMIC | 0.0047MF | 20% | 400V |
| CN101 | *1-564-706-31 | PIN, CONNECTOR (SMALL TYPE) 4P | | | |
| CN102 | *1-564-710-11 | PIN, CONNECTOR (SMALL TYPE) 8P | | | |
| CN201 | *1-564-339-61 | PIN, CONNECTOR 5P | | | |

| Ref.No. | Part No. | Description |
|---|---|---|
| CN203 | *1-564-706-11 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN204 | *1-564-706-41 | PIN, CONNECTOR (SMALL TYPE) 4P |
| CN256 | *1-564-336-51 | PIN, CONNECTOR 2P |
| CN258 | *1-564-337-51 | PIN, CONNECTOR 3P |
| CN260 | *1-564-704-11 | PIN, CONNECTOR (SMALL TYPE) 2P |
| CN302 | *1-564-340-00 | PIN, CONNECTOR 6P |
| CN303 | *1-564-342-11 | PIN, CONNECTOR 8P |
| CN390 | 1-464-878-11 | TRANSMITTER UNIT, RAY |
| CN400 | *1-564-709-11 | PIN, CONNECTOR (SMALL TYPE) 7P |
| CN410 | *1-564-723-11 | PIN, CONNECTOR (SMALL TYPE) 7P |
| CN420 | *1-564-719-11 | PIN, CONNECTOR (SMALL TYPE) 3P |
| CN450 | 1-564-722-11 | PIN, CONNECTOR (SMALL TYPE) 6P |
| CN810 | *1-564-497-11 | PIN, CONNECTOR 4P |
| CN900 | *1-564-341-11 | PIN, CONNECTOR 7P |
| CN920 | *1-564-705-11 | PIN, CONNECTOR (SMALL TYPE) 3P |
| CNJ252 | *1-564-720-21 | PIN, CONNECTOR (SMALL TYPE) 4P |
| D101 | 8-719-940-76 | DIODE 1SS132 |
| D904 | 8-719-940-76 | DIODE 1SS132 |
| D905 ⚠ | 8-719-940-76 | DIODE 1SS132 |
| D906 ⚠ | 8-719-940-76 | DIODE 1SS132 |
| D907 | 8-719-928-82 | DIODE HZS4.3NB3 |
| D908 ⚠ | 8-719-200-77 | DIODE 10E2N |
| D909 ⚠ | 8-719-200-77 | DIODE 10E2N |
| D910 ⚠ | 8-719-200-77 | DIODE 10E2N |
| D911 ⚠ | 8-719-200-77 | DIODE 10E2N |
| D912 ⚠ | 8-719-940-76 | DIODE 1SS132 |
| D913 ⚠ | 8-719-940-76 | DIODE 1SS132 |
| D914 | 8-719-940-76 | DIODE 1SS132 |
| D915 | 8-719-940-76 | DIODE 1SS132 |
| D920 | 8-719-200-77 | DIODE 10E2N |
| D921 | 8-719-200-77 | DIODE 10E2N |
| D922 | 8-719-200-77 | DIODE 10E2N |
| D923 | 8-719-200-77 | DIODE 10E2N |
| D943 | 8-719-200-77 | DIODE 10E2N |
| D945 | 8-719-933-57 | DIODE HZS9B2L |
| FLD801 | 1-519-428-21 | INDICATOR TUBE, FLUORESCENT |
| IC101 | 8-752-031-80 | IC CXA1081S |
| IC201 | 8-759-202-01 | IC TA7256P |
| IC202 | 8-759-805-18 | IC LA6520 |
| IC204 | 8-752-032-33 | IC CXA1182S |
| IC301 | 8-759-971-40 | IC MSM6408-26SS |
| IC302 | 8-752-322-04 | IC CXD1125Q |
| IC303 | 8-752-320-44 | IC CXK5816M-10L |
| IC351 | 8-759-630-16 | IC M50740A-424SP |
| IC352 | 8-759-820-64 | IC LC9600R-183 |
| IC380 | 8-759-605-44 | IC M74HC6004P |
| IC400 | 8-759-745-61 | IC NJM4560D-D |
| IC450 | 8-759-700-74 | IC NJM4556S |
| IC500 | 8-759-745-61 | IC NJM4560D-D |
| IC520 | 8-759-939-35 | IC CXD1088Q |
| IC521 | 8-759-939-94 | IC TDA1541-N5 |
| IC801 | 8-752-803-69 | IC CXP5058H-068Q |
| IC802 | 8-741-138-70 | IC BX-1387 |
| IC900 | 8-759-630-21 | IC M5290P-16 |
| IC921 | 8-759-602-66 | IC M5230L-A |
| IC940 | 8-759-602-02 | IC M5219P |

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| Ref.No. | Part No. | Description |
|---|---|---|
| J380 | 1-566-922-11 | JACK, PIN 1P (DIGITAL OUT) |
| J400 | 1-563-867-11 | JACK, PIN 2P (LINE OUT) |
| J450 | 1-563-485-21 | JACK, LARGE TYPE (HEADPHONES) |
| L380 | *1-410-858-11 | INDUCTOR 0UH |
| M251 | A-4608-346-A | MOTOR ASSY, L |
| M252 | X-4917-504-1 | ASSY, MOTOR (SLED) |
| M253 | X-4917-523-1 | ASSY, MOTOR (SPINDLE) |
| PS201⚠ | 1-532-605-00 | LINK, IC |
| PS202⚠ | 1-532-605-00 | LINK, IC |
| PS205⚠ | 1-532-605-00 | LINK, IC |
| PS206⚠ | 1-532-605-00 | LINK, IC |
| PS901⚠ | 1-532-675-00 | LINK, IC |
| PS911⚠ | 1-532-675-00 | LINK, IC |
| PS920⚠ | 1-532-685-00 | LINK, IC |
| PS930⚠ | 1-532-685-00 | LINK, IC |
| Q101 | 8-729-801-83 | TRANSISTOR 2SB1013 |
| Q205 | 8-729-806-38 | TRANSISTOR 2SC3399 |
| Q206 | 8-729-806-28 | TRANSISTOR 2SC3402 |
| Q400 | 8-729-107-77 | TRANSISTOR 2SC3623-L |
| Q401 | 8-729-107-77 | TRANSISTOR 2SC3623-L |
| Q402 | 8-729-107-77 | TRANSISTOR 2SC3623-L |
| Q500 | 8-729-107-77 | TRANSISTOR 2SC3623-L |
| Q501 | 8-729-107-77 | TRANSISTOR 2SC3623-L |
| Q502 | 8-729-107-77 | TRANSISTOR 2SC3623-L |
| Q520 | 8-729-115-15 | TRANSISTOR BN1A4N |
| Q521 | 8-729-115-15 | TRANSISTOR BN1A4N |
| Q522 | 8-729-806-38 | TRANSISTOR 2SC3399 |
| Q523 | 8-729-806-38 | TRANSISTOR 2SC3399 |
| Q801 | 8-729-902-11 | TRANSISTOR 2SC2021 |
| Q900 | 8-729-808-72 | TRANSISTOR 2SB1274SA |
| Q901 | 8-729-806-38 | TRANSISTOR 2SC3399 |
| Q910 | 8-729-808-76 | TRANSISTOR 2SD1913SA |
| Q911 | 8-729-806-20 | TRANSISTOR 2SA1345 |
| Q912 | 8-729-806-38 | TRANSISTOR 2SC3399 |
| Q913 | 8-729-806-20 | TRANSISTOR 2SA1345 |
| Q920 | 8-729-806-38 | TRANSISTOR 2SC3399 |
| Q931 | 8-729-103-43 | TRANSISTOR 2SB734 |
| Q940 | 8-729-802-22 | TRANSISTOR 2SB1014 |
| R101 | 1-215-396-00 | CARBON 91 5% 1/4W |
| R102 | 1-214-092-00 | METAL 22 1% 1/4W |
| R103 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R104 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R105 | 1-249-421-11 | CARBON 2.2K 5% 1/4W |
| R106 | 1-249-428-11 | CARBON 8.2K 5% 1/4W |
| R107 | 1-215-450-00 | CARBON 16K 5% 1/4W |
| R108 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R109 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R110 | 1-249-432-11 | CARBON 18K 5% 1/4W |
| R111 | 1-249-432-11 | CARBON 18K 5% 1/4W |
| R112 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R201 | 1-249-393-11 | CARBON 10 5% 1/4W |
| R203 | 1-249-393-11 | CARBON 10 5% 1/4W |
| R204 | 1-249-381-11 | CARBON 1 5% 1/4W |
| R205 | 1-247-881-00 | CARBON 120K 5% 1/4W |
| R206 | 1-215-472-00 | CARBON 130K 5% 1/4W |
| R207 | 1-249-381-11 | CARBON 1 5% 1/4W |

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| Ref.No. | Part No. | Description |
|---|---|---|
| R208 | 1-247-881-00 | CARBON 120K 5% 1/4W |
| R210 | 1-215-472-00 | CARBON 130K 5% 1/4W |
| R211 | 1-249-437-11 | CARBON 47K 5% 1/4W |
| R212 | 1-249-436-11 | CARBON 39K 5% 1/4W |
| R213 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R214 | 1-249-423-11 | CARBON 3.3K 5% 1/4W |
| R216 | 1-249-393-11 | CARBON 10 5% 1/4W |
| R217 | 1-249-438-11 | CARBON 56K 5% 1/4W |
| R219 | 1-249-424-11 | CARBON 3.9K 5% 1/4W |
| R220 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R222 | 1-215-472-00 | CARBON 130K 5% 1/4W |
| R223 | 1-249-393-11 | CARBON 10 5% 1/4W |
| R224 | 1-249-393-11 | CARBON 10 5% 1/4W |
| R228 | 1-215-486-00 | CARBON 510K 5% 1/4W |
| R229 | 1-249-435-11 | CARBON 33K 5% 1/4W |
| R230 | 1-215-479-00 | CARBON 270K 5% 1/4W |
| R231 | 1-249-440-11 | CARBON 82K 5% 1/4W |
| R232 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R233 | 1-249-414-11 | CARBON 560 5% 1/4W |
| R234 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R235 | 1-215-434-00 | METAL 3.6K 1% 1/6W |
| R236 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R237 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R301 | 1-249-405-11 | CARBON 100 5% 1/4W |
| R303 | 1-215-469-00 | METAL 100K 1% 1/6W |
| R304 | 1-215-469-00 | METAL 100K 1% 1/6W |
| R305 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R306 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R307 | 1-249-429-11 | CARBON 10K 5% 1/4W |
| R308 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R309 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R310 | 1-215-493-00 | CARBON 1M 5% 1/4W |
| R351 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R380 | 1-249-412-11 | CARBON 390 5% 1/4W |
| R381 | 1-215-396-00 | CARBON 91 5% 1/4W |
| R390 | 1-249-428-11 | CARBON 8.2K 5% 1/4W |
| R391 | 1-249-408-11 | CARBON 180 5% 1/4W |
| R400 | 1-247-838-00 | CARBON 2K 5% 1/4W |
| R401 | 1-249-418-11 | CARBON 1.2K 5% 1/4W |
| R402 | 1-215-493-00 | CARBON 1M 5% 1/4W |
| R403 | 1-249-425-11 | CARBON 4.7K 5% 1/4W |
| R404 | 1-215-430-00 | CARBON 2.4K 5% 1/4W |
| R405 | 1-215-430-00 | CARBON 2.4K 5% 1/4W |
| R406 | 1-249-441-11 | CARBON 100K 5% 1/4W |
| R407 | 1-249-409-11 | CARBON 220 5% 1/4W |
| R408 | 1-249-414-11 | CARBON 560 5% 1/4W |
| R409 | 1-249-421-11 | CARBON 2.2K 5% 1/4W |
| R410 | 1-249-433-11 | CARBON 22K 5% 1/4W |
| R411 | 1-249-421-11 | CARBON 2.2K 5% 1/4W |
| R412 | 1-249-409-11 | CARBON 220 5% 1/4W |
| R450 | 1-249-417-11 | CARBON 1K 5% 1/4W |
| R451 | 1-249-423-11 | CARBON 3.3K 5% 1/4W |
| R452 | 1-249-423-11 | CARBON 3.3K 5% 1/4W |
| R453 | 1-249-402-11 | CARBON 56 5% 1/4W |
| R500 | 1-247-838-00 | CARBON 2K 5% 1/4W |
| R501 | 1-249-418-11 | CARBON 1.2K 5% 1/4W |
| R502 | 1-215-493-00 | CARBON 1M 5% 1/4W |

| Ref.No. | Part No. | Description | | | |
|---|---|---|---|---|---|
| R503 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R504 | 1-215-430-00 | CARBON | 2.4K | 5% | 1/4W |
| R505 | 1-215-430-00 | CARBON | 2.4K | 5% | 1/4W |
| R506 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R507 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R508 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W |
| R509 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R510 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R511 | 1-249-421-11 | CARBON | 2.2K | 5% | 1/4W |
| R512 | 1-249-409-11 | CARBON | 220 | 5% | 1/4W |
| R520 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R521 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R522 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R523 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R524 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R525 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R526 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R527 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R528 | 1-249-416-11 | CARBON | 820 | 5% | 1/4W |
| R550 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R551 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R552 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R553 | 1-249-402-11 | CARBON | 56 | 5% | 1/4W |
| R848 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R901 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R902 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R903 | 1-249-405-11 | CARBON | 100 | 5% | 1/4W |
| R904 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R910 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R911 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R912 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R920 | 1-249-399-11 | CARBON | 33 | 5% | 1/4W |
| R921 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W |
| R922 | 1-215-493-00 | CARBON | 1M | 5% | 1/4W |
| R923 | 1-215-454-00 | CARBON | 24K | 5% | 1/4W |
| R924 | 1-249-423-11 | CARBON | 3.3K | 5% | 1/4W |
| R930 | 1-249-399-11 | CARBON | 33 | 5% | 1/4W |
| R931 | 1-249-431-11 | CARBON | 15K | 5% | 1/4W |
| R932 | 1-249-414-11 | CARBON | 560 | 5% | 1/4W |
| R941 ⚠ | 1-212-857-00 | FUSIBLE | 10 | 5% | 1/4W F |
| R942 | 1-249-433-11 | CARBON | 22K | 5% | 1/4W |
| R943 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R944 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R945 | 1-249-434-11 | CARBON | 27K | 5% | 1/4W |
| R946 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| RV101 | 1-228-995-00 | RES, ADJ, CARBON 22K | | | |
| RV102 | 1-228-995-00 | RES, ADJ, CARBON 22K | | | |
| RV103 | 1-228-995-00 | RES, ADJ, CARBON 22K | | | |
| RV104 | 1-228-993-00 | RES, ADJ, CARBON 4.7K | | | |
| RV201 | 1-228-990-00 | RES, ADJ, METAL GLAZE 1K | | | |
| RV450 | 1-237-438-11 | RES, VAR, CARBON 20K/20K (HEADPHONES LEVEL) | | | |
| S251 | 1-571-300-11 | SWITCH, ROTARY | | | |
| S252 | 1-571-274-11 | SWITCH, LEAF | | | |
| S801 | 1-570-876-11 | SWITCH, KEY BOARD (1A) | | | |
| S802 | 1-570-876-11 | SWITCH, KEY BOARD (2B) | | | |
| S803 | 1-570-876-11 | SWITCH, KEY BOARD (3C) | | | |
| S804 | 1-570-876-11 | SWITCH, KEY BOARD (4D) | | | |
| S805 | 1-570-876-11 | SWITCH, KEY BOARD (5E) | | | |

| Ref.No. | Part No. | Description |
|---|---|---|
| S806 | 1-570-876-11 | SWITCH, KEY BOARD (6F) |
| S807 | 1-570-876-11 | SWITCH, KEY BOARD (7) |
| S808 | 1-570-876-11 | SWITCH, KEY BOARD (8) |
| S809 | 1-570-876-11 | SWITCH, KEY BOARD (9) |
| S810 | 1-570-876-11 | SWITCH, KEY BOARD (10) |
| S811 | 1-570-876-11 | SWITCH, KEY BOARD (11) |
| S812 | 1-570-876-11 | SWITCH, KEY BOARD (12) |
| S813 | 1-570-876-11 | SWITCH, KEY BOARD (13) |
| S814 | 1-570-876-11 | SWITCH, KEY BOARD (14) |
| S815 | 1-570-876-11 | SWITCH, KEY BOARD (15) |
| S816 | 1-570-876-11 | SWITCH, KEY BOARD (16) |
| S817 | 1-570-876-11 | SWITCH, KEY BOARD (17) |
| S818 | 1-570-876-11 | SWITCH, KEY BOARD (18) |
| S819 | 1-570-876-11 | SWITCH, KEY BOARD (19) |
| S820 | 1-570-876-11 | SWITCH, KEY BOARD (20) |
| S821 | 1-570-876-11 | SWITCH, KEY BOARD (▶▶) |
| S822 | 1-570-876-11 | SWITCH, KEY BOARD (ERASE) |
| S823 | 1-570-876-11 | SWITCH, KEY BOARD (CONTINUE) |
| S824 | 1-570-876-11 | SWITCH, KEY BOARD (SHUFFLE) |
| S825 | 1-570-876-11 | SWITCH, KEY BOARD (PROGRAM) |
| S826 | 1-570-876-11 | SWITCH, KEY BOARD (>20) |
| S827 | 1-570-876-11 | SWITCH, KEY BOARD (CHECK) |
| S828 | 1-570-876-11 | SWITCH, KEY BOARD (CLEAR) |
| S829 | 1-570-876-11 | SWITCH, KEY BOARD (FILE) |
| S830 | 1-570-876-11 | SWITCH, KEY BOARD (INDEX MODE) |
| S832 | 1-570-876-11 | SWITCH, KEY BOARD (■) |
| S833 | 1-570-876-11 | SWITCH, KEY BOARD (⏮) |
| S834 | 1-570-876-11 | SWITCH, KEY BOARD (⏭) |
| S835 | 1-570-876-11 | SWITCH, KEY BOARD (◀◀) |
| S836 | 1-570-876-11 | SWITCH, KEY BOARD (TIME/MEMO) |
| S837 | 1-570-876-11 | SWITCH, KEY BOARD (OPEN/CLOSE) |
| S838 | 1-570-876-11 | SWITCH, KEY BOARD (AUTO PAUSE) |
| S839 | 1-570-876-11 | SWITCH, KEY BOARD (REPEAT) |
| S841 | 1-570-876-11 | SWITCH, KEY BOARD (▶) |
| S842 | 1-570-876-11 | SWITCH, KEY BOARD (⏸) |
| S851 | 1-571-305-11 | SWITCH, PUSH (1 KEY)(POWER) |
| S901 ⚠ | 1-570-046-21 | (E)...SWITCH, VOLTAGE CHANGE |
| T990 ⚠ | 1-449-210-11 | (AEP,UK)...TRANSFORMER, POWER |
| T990 ⚠ | 1-449-238-11 | (E).....TRANSFORMER, POWER |
| TB900 * | 1-535-120-00 | TERMINAL |
| ⚠TB990.* | 1-535-139-00 | (E).....BASE POST 19MM(1 OMM PITCH) 2P |
| ⚠TB990.* | 1-535-140-11 | (AEP,UK)..BASE POST 19MM(1 OMM PITCH) 3P |
| TB991⚠ | 1-535-416-00 | TERMINAL |
| TB992⚠ | 1-535-416-00 | TERMINAL |
| X301 | 1-567-686-11 | OSCILLATOR, CERAMIC (4MHz) |
| X520 | 1-567-926-11 | VIBRATOR, CRYSTAL (16.9344MHz) |
| X801 | 1-567-192-11 | OSCILLATOR, CERAMIC (4MHz) |

ACCESSORY & PACKING MATERIAL

| | | |
|---|---|---|
| | 1-463-994-11 | REMOTE COMMANDER (RM-D600) |
| | 1-558-543-11 | CORD, CONNECTION |
| | 3-769-888-11 | (UK,E)...MANUAL, INSTRUCTION |
| | 3-769-888-41 | (AEP)....MANUAL, INSTRUCTION |
| | 3-795-629-15 | (AEP)...INSTRUCTION |
| | 4-921-935-01 | CUSHION |
| * | 4-922-631-11 | INDIVIDUAL CARTON |
| | 7-632-650-75 | SHEET PROTECTION (500MM) |

**Note:** The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

9-953-105-11

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Audio Group

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